This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

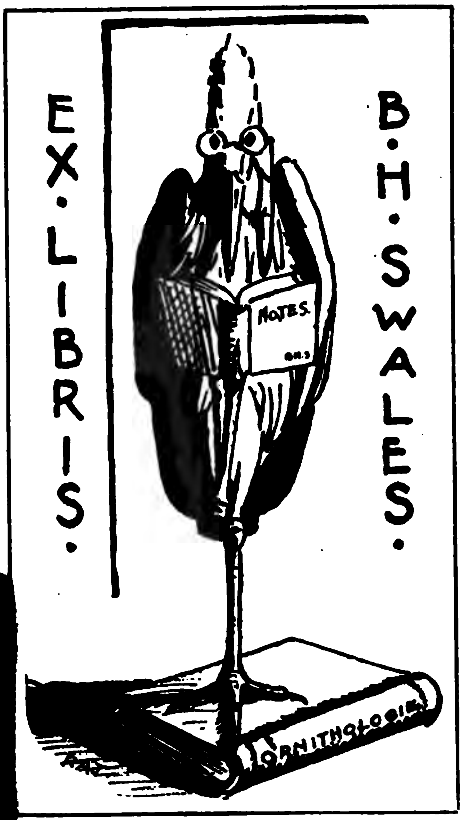
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

B 1,648,156


EX·LIBRIS·
B·H·SWALES·
NOTES.
B.H.S
ORNITHOLOGIE

E
78
.C2
T7

1887/88
1888/89

1893/94
1894/95

1896/97
1897/98

Oct 19-1908

2 ANNUAL REPORT

OF THE

CANADIAN INSTITUTE

SESSION 1887-8.

BEING PART OF APPENDIX L.

TO THE

REPORT OF THE MINISTER OF EDUCATION, ONTARIO,

1888.

Printed by Order of the Legislative Assembly.

TORONTO:
PRINTED BY WARWICK & SONS, 68 & 70 FRONT STREET WEST.
1889.

TABLE OF CONTENTS.

PAGE.
ANNUAL REPORT OF THE COUNCIL OF THE CANADIAN INSTITUTE—SESSION 1887-88 1
Appendix I. Membership 2
" II. Treasurer's Statement 3
" III. Donations and Exchanges 5
" IV. Societies, etc., exchanged with 5
" V. Periodicals subscribed for 5
" VI. Classification of Papers 5

REPORTS OF SECTIONS—

(1) Biological Section 5
(2) Architectural Section 6
(3) Philological Section 7
(4) Geological and Mining Section 7
ARCHÆOLOGICAL REPORT (by the Curator) 9

NOTES—

Pottery 16
Clay Pipes 20
Stone Pipes 23
Implements of Stone 28
Bone 40
Shell 40
Flints 41
Carved Head 46
Tablets 46
Copper 48
CONTRIBUTIONS TOWARDS A BIBLIOGRAPHY OF THE ARCHÆOLOGY OF THE DOMINION OF CANADA AND NEWFOUNDLAND 54

ANNUAL REPORT OF THE COUNCIL OF THE CANADIAN INSTITUTE—SESSION, 1887-88.

The Council of the Canadian Institute has the honour to lay before the members its Thirty-Ninth Annual Report:

Early in the past Session the President, Mr. W. H. Vander Smissen, to whose exertions so much of the increased activity and prosperity of the Institute were due, was unfortunately obliged, through the pressure of other duties, to resign, and the Vice-President being at the time absent in Europe, Mr. Charles Carpmael was elected to fill the vacant position. Twenty-six meetings, including the annual conversazione, have been held during the past session, at which thirty-nine papers have been read, in addition to fifty read at Section meetings. The aggregate number of papers read thus exceeds by seventeen that of the preceding year, when there were but seventy-two, and this number was again largely in excess of that of any previous year in the history of the Institute. The character of these communications has been fully equal to the standard of previous years, and the range of subjects (as shown in the appendix) has been unusually large. The average attendance at the regular weekly meetings has also shown an increase. It is also satisfactory to notice that there has been a considerable increase in the number of members who have made use of the reading-room. On the occasion of the annual conversazione, the Museum of Natural History and Archæology was opened, and there was an excellent exhibition of photographs by the Photographic Section. There was a large attendance of members and their friends. The Archæological collection is already extensive, and has been admirably arranged by the Curator, to whom the Institute is greatly indebted for his exertions, both in collecting specimens and in carefully classifying them. The Archæological Report, which has been bound up with the Annual Report of the Institute for the year 1886-87, is already in the hands of the members, and contains an account of what has been done by the Institute down to December last, in this field. Our exertions to add to our collection continue unabated, and the Council has thankfully to acknowledge the grant of $1,000 by the Ontario Government, which will enable us to devote a considerable sum, as in the past year, to this purpose. The number of books and pamphlets received during the year, is shown in Appendix III, to have continued to increase, and to have been considerably more than eight times as large as it was five years ago. A pamphlet has been prepared by Mr. Sandford Fleming, on the subject of "Time Reckoning," and issued by the Institute for the purpose of introducing the subject, in the educational institutions throughout the Dominion. In this pamphlet the principles of time-reckoning are set forth, with special reference to the recommendations of the Washington conference on the subject. A deputation of the Council of the Institute has waited upon the Minister of Education of the Province of Ontario, and acting on the recommendation of this deputation, the Minister has requested to be furnished with five hundred copies of the pamphlet, for distribution to the head masters of the various high schools and collegiate institutes in the Province. The Council has also sent copies of the pamphlet to the Ministers of Education in the other Provinces. It will be remembered that it was a paper by Mr. Sandford Fleming, read before this Institute, copies of which were forwarded with a memorial from the Institute to the Marquess of Lorne, then Governor-General of the Dominion of Canada, and through him to the British Government, and to various foreign scientific institutions, which first called prominent attention throughout the world to this subject. The views then advanced by Mr. Sandford Fleming, were very generally accepted by scientific men in all civilized nations, the subject was discussed at various congresses, and in October, 1884, a conference was held at Washington on the invitation of the President of the United States, at which twenty-five nations were represented, and the proposed reforms were by it recommended for adoption by all nations. Your Council has every reason to hope that the pamphlet now issued will facilitate the introduction of these reforms in Canada. A memorial was also forwarded to the Minister of the Interior in connection with Geological and Mining affairs, and in reply a certified copy of a report of a committee of the Honorable the Privy Council, approved by his Excellency the Governor-General in Council on the 28th September, 1887, has been received, in which it is set forth that a Division of the Geological Branch of the Interior has recently been organized by the appointment to the permanent staff of the Survey, of a Mining Engineer and a Mining Geologist, to examine and report upon the mining industries of the Dominion, to collect mineral statistics, and otherwise to work out the economic geology of our mining districts. While congratulating the Institute on the increase in membership and activity, the Council feels it necessary to impress upon the members that much has yet to be done in the direction of the further extension of the Museum and Library. Our accommodation in these is still inadequate, and additional shelving and cases are required, The balance shown on our balance sheet is already expended. It therefore urges upon the members the necessity of supporting the present efforts of the Committee of Ways and Means by every means in their power, by contributions, by presenting the claims of the Institute to the public in every possible way, and by endeavoring to obtain new members. During the past year the Institute has lost by death one of its most distinguished honorary members, Prof. Balfour Stewart, of Owen's College, Manchester. Balfour Stewart's name was first prominently brought before the public by his researches on radiant heat, published in 1858. In 1859 he was appointed Director of Kew Observatory, and held this post until 1870, when he was appointed Professor ot Physics at Owen's College, Manchester. He died of apoplexy on December 18, 1887.

CHARLES CARPMAEL,
President.

APPENDIX I.

Membership.

Number of Members April 1, 1887	290
Withdrawals and deaths during the year	27
	263
Elected during the year	56
Total members, April 1, 1888	319

Composed of:

Honorary Members	6
Life Members	12
Ordinary Members	301
Total	319
Associates	54

APPENDIX II.

Treasurer in Account with the Canadian Institute for the Year Ending March 31st, 1888.

To Summary :—

" Balance on hand	$56 40
" Annual Subscriptions	909 75
" Rents	206 50
" Government Grant	1,000 00
" Journals sold	7 15
" Periodicals sold	38 80
" Donation	2 50
" Interest	1 14
' Proceeds of Note	200 00
	$2,422 24

By Summary :—

" Salaries	$314 00
" Printing Journal	813 27
" " Miscellaneous	59 00
" Stationery	2 00
" Postage	78 85
" Freight and Express Charges	13 53
" Repairs	36 64
" Gas	40 75
" Water	24 00
" Periodicals	120 76
" Furniture	11 15
" Housekeeping	43 80
" Fuel	20 75
" Insurance	52 00
" Blinds	10 00
" Gas Lights	19 20
" Taxes	9 75
" Journals purchased	2 50
" City Directory	3 00
" Chemicals for Museum	8 53
" Grant to Photographic Section	40 00
" Sundries	8 00
" Interest	218 00
" Promissory Note	300 00
" Balance, Imperial Bank	163 56
" " on hand	9 20
	$2,422 24

Bank Balance as per Bank Book		$273 67
Balance as above	$163 56	
" for Building Fund	110 11	
		273 67

Building Account.

Date	Item		Amount
1887. April 1,	to Balance		$662 83

Date	Item		Amount
1887.			
April 29th,	By Carpenters Contract, Certificate No. 3,..		$32 75
May 5th,	" Painters " " " 1,..		113 40
Nov. 18th,	" Plasterers " " " 1,..		41 80
Oct. 16th,	" Roofers " " " 1,..		25 00
May 17th,	" Contract for Cases	$ 50 00	
Oct. 24th,	" "	75 00	
	" "	100 00	
Nov. 16th,	" "	65 00	
			290 98
Dec. 16th,	" Law Expenses		3 64
1888.			
Jan. 13th,	" Carpenters Account for Alterations and Shelves		45 15
	" Balance in Imperial Bank		110 11
			$662 83

Archæological Grant.

Item	Amount
To Grant, 1887	$1,000 00

Item	Amount
By Grant to Fort Rouille monument	$200 00
" Purchase of Specimens	235 50
" Engraving of Specimens for Report	134 55
" Travelling expenses, sundry expenses and remuneration of the Curator	394 50
" Balance on hand	35 45
	$1,000 00

(Signed) W. A. DOUGLASS, ALFRED BAKER, } *Auditors.*

Assets.

Item	Amount
Building	$11,500 00
Warehouse	720 00
Ground	3,000 00
Library	5,500 00
Specimens	2,000 00
Personal property	1,000 00
	$23,720 00

Liabilities.

Item	Amount
Mortgage No. 1, due 1892	$3,000 00
" 2, " 1892	1,000 00
Note discounted	200 00
Balance in favour of the Institute	19,520 00
	$23,720 00

APPENDIX III.

Donations and Exchanges.—Books and Pamphlets received from April 1st, 1887, to April 1st, 1888 :—From Canada, 229 ; United States, 503 ; Great Britain and Ireland, 466 ; India and Australasia, 90 ; all other countries, 1,045. Total, 2,333.

Total number received in 1882-3, 280 ; in 1883-4, 800 ; in 1884-5, 730 ; in 1885-6, 1,502 ; in 1886-7, 2,230 ; in 1887-8, 2,333.

APPENDIX IV.

The number of Societies and Publications with which the Institute exchanges is 396

APPENDIX V.

The Periodicals subscribed for are the same as last year, with the addition of the *Amateur Photographer.*

APPENDIX VI

Classification of papers read by subjects :—Anthropology, 3 ; Archæology, 1 ; Biology, 2 ; Botany, 1 ; Chemistry, 1 ; Economics, 4 ; Geology, 4 ; Geography, 2 ; Jurisprudence, 1 ; Medicine, 1 ; Metallurgy, 1 ; Meteorology, 1 ; Philology, 4 ; Political Science, 3 ; Psychology, 1 ; Sociology, 1 ; Solar Physics, 1 ; Telegraphy and Telephony, 1 ; Zoology, 4 ; Miscellaneous, 2. Total, 39.

Read at Section Meetings :—Architectural Section, 12 ; Biological Section, 22 ; Geological and Mining Section, 6 ; Philological Section, 10. Total, 50.

REPORTS OF SECTIONS OF THE CANADIAN INSTITUTE, 1887-8.

(1) *Report of the Biological Section.*

The Biological Section of the Canadian Institute has held its regular meetings on the 1st and 3rd Mondays in every month during the past session. At each of these meetings one or more original papers have been read on a variety of topics, as may be seen on reference to the programmes issued.

The "Microscope Fund" has, through the liberality of a few members and their friends, been sufficiently augmented to allow of the purchase of a first-class instrument, now expected to arrive in a few days.

Yours faithfully,

W. E. MIDDLETON.

Schedule of Papers Read in Biological Section 1887-8.

May	2	1887,	"The English Rabbit as an Agricultural Pest,"	William Brodie
	16,	"	"The Fresh Water Hydra,"	W. E. Middleton
			"The Coleoptera of the N.W.T.,"	Wm. Brodie
June	20,	"	"The Acclimatization of the English Goldfinch,"	Wm. Brodie
Oct.	3,	"	"Canadian Ants,"	Wm. Brodie
	17,	"	"Canadian Gall Insects,"	Wm. Brodie
Nov.	7,	"	"Foreign Ants,"	W. E. Middleton
	21,	"	"Hyphantria Cunea,"	Wm. Brodie
Dec.	5,	"	"The Brownian Movement,"	W. E. Middleton
			"Mind in Animals,"	Wm. Brodie
			"The Calamorpha Moth,"	Wm. Brodie
	19,	"	"Canadian Reptiles,"	J. B. Williams
Jan.	16,	1888,	"Planorbis Corpulentus,"	Wm. Brodie
			"Some Canadian Insects,"	Wm. Brodie
Feb.	6,	"	"Birds' Eggs,"	E. V. Rippon
			"Museum Collections and their Preservation,"	C. Armstrong
			"Certain Alleged Digestive Glands of Carnivorous Plants,"	W. E. Middleton
			"The English Sparrow,"	Dr. Garnier
	20,	"	"Chloroform,"	Wm. Brodie
March	5,	"	"Coleoptera of the N. W. T.," No. 2	Wm. Brodie
April	2,	"	"Habits of Canadian Birds,"	E. E. Thompson
	16,	"	"The Echini,"	Rev. K. F. Junor

(22 papers.)

The Officers for the ensuing year are :—James H. Pearce, President ; W. E. Middleton, Secretary.

●

(2) *Report of the Architectural Section.*

The Architectural Section of the Canadian Institute has the honor to present its Second Annual Report :

Since our first report to the Canadian Institute we have held weekly meetings during the winter months, closing the first session of our existence on May 9th, 1887, and commencing the session of 1887-88 on October 11th.

The following papers and addresses were delivered before this section during the past year :

April	4th,	1887,	Mr. C. F. Wagner read a paper on "Carpentering."
	11th,	"	Mr. J. W. Gray read a paper on "The Doric Temple in its Constructive Aspect."
May	2nd,	"	Mr. Curry gave an address on "Plumbing," illustrated by drawings, showing correct and defective work.
Jan.	17th,	1888,	Mr. M. J. Hynes gave an address on the subject of "Terra Cotta."
	24th,	"	Mr. Frank Douglas read a paper on "Renaissance Architecture."
	31st,	"	Mr. J. B. Vick gave an address on "Stone Cutting and Stone Setting."
Feb.	7th,	"	Mr. A. G. Gregg read a paper on "Architectural Lessons from the Human Figure."
	14th,	"	Mr. Jas. Wright gave an address on "Plastering."
	28th,	"	Mr. Wm. Simpson gave an address on "Joinery."
Mar.	20th,	"	Mr. R. J. Hovenden gave an address on "Painting."
	27th,	"	Mr. R. J. Hovenden gave an address on "The Manufacture; Adulteration and Application of Colors."
April	10th,	"	Mr. Wm. Phillips gave an address on "House Drainage."

The officers for the ensuing year are: Chairman, A. F. Wickson; Vice-Chairman, R. Dawson; Treasurer, C. D. Lennox; Secretary, J. F. Brown; Committee of Management, John Howard and G. F. W. Price.

ROBERT DAWSON,
Chairman.

TORONTO, April 10th, 1888.

(3) *Report of the Philological Section.*

GENTLEMEN,—In accordance with the constitution of the Canadian Institute I beg to submit the following report of the work of the Philological Section for the year ending March 31st, 1888:

The number of members on the roll is eighteen. Since the 31st March, 1887, the section has held eleven meetings. Since December 13th, 1887, the meetings of the section have taken place at twenty o'clock on the second and fourth Tuesdays in each month of the session of the Institute.

At the meeting of November 14th, 1887, it was decided that the section should take up the study of "Phonetics," and the work of the members has to a great extent been the pursuance of such study.

At the meeting of January 10th, 1887, Mr. George E. Shaw, B.A., resigned the position of Secretary of the Section, to which office Mr. A. F. Chamberlain, B.A., was appointed.

During the year the following papers have been read before the Section:

(1) April 11th, 1887, "The Science of Language in Popular Education," by the Rev. J. F. McCurdy, Ph.D.
(2) 25th, " "Umbrian Inscriptions," by the Rev. Dr. McNish.
(3) May 9th, " "An International Alphabet with a System of Shorthand," by M. L. Rouse.
(4) Dec. 13th, " "The Organs of Speech, with Special Reference to the Production of Speech in the Larynx," by Dr. G. R. McDonagh.
(5) Jan. 10th, 1888, "Throat Sounds," by the Rev. J. F. McCurdy, Ph.D.
(6) 24th, " "Portuguese Nasal Sounds," by G. E. Shaw, B.A.
(7) Mar. 27th, " "A Contribution to the Study of the Franco-Canadian Dialect," by Jno. Squair, B.A.

(Signed)

A. F. CHAMBERLAIN,
Secretary Philol. Sect. C. I.

TORONTO, April 7th, 1888.

(4) *Report of the Geological and Mining Section.*

This Section of the Institute was organized at a meeting held on the 20th of April, 1887, and its Regulations and By-laws were approved by the Council on the 30th of the same month. The names of sixteen members of the Institute are enrolled on the minute book as members of the Section.

Besides the inaugural meeting, six meetings of the Section have been held during the year. The attention of the Section was called soon after its formation to the want of statistics and other trustworthy information relating to the mining and metallurgical operations carried on in the Dominion, and the desirableness of the public being put in possession of such information as soon after the close of each year as possible. A memorial setting forth these views was prepared by the Section, approved by the Institute, and forwarded to the Dominion Government in May of last year. In answer to this memorial the Government replied on the 28th September, that an Order in Council was passed creating a division of the Geological Survey to attend to these matters. Furthermore, in reply to an interview had with the Deputy-Minister of the Interior by an authorized sub-committee of the Section, consisting of the chairman and secretary, the Minister stated: (1) That the officers of the division referred to have been appointed; (2) That the publication of statistics and information by this division will hereafter be much more prompt after the close of each year than hitherto; (3) That the Dominion Government has co-operated and will co-operate with the Provincial Governments in the direction of acquiring mining and metallurgical information; and (4) That the Government is considering the publication of all reports of the Geological Survey relating to mining and metallurgy in Canada since 1863 in connection with the work of the forthcoming census.

A select committee of the Section has also prepared an exhaustive report, with tables of exports and imports, on the minerals and raw metallurgical products of the United Kingdom, the United States, Canada and the other Colonies of the Empire, more especially in regard to the trade of the several countries with each other.

In addition to the foregoing work accomplished by the Section, papers were read at the several meetings as follows:

1. "On the Mineral Production of Canada in 1886-7," by Wm. Hamilton Merritt.
2. "On Iron and other Ores of Ontario," by James T. B. Ives.
3. "On certain Lacustrine Deposits and their Economic Values," by Arthur Harvey.
4. "On the Physical Aspects of Iron Smelting," by Samuel D. Mills, of St. Ignace, Michigan.
5. "Notes on Thunder Bay Silver Ores," by Robert B. Headley, of Port Arthur.
6. "Notes on New Jersey Iron Ores," by Wm. Hamilton Merritt.

Two officers elected at the organization of the Section, viz.: Alexander McNabb, Vice-Chairman; and J. T. B. Ives, Curator, having resigned in consequence of leaving the country, their places were filled by the appointment thereto of Arthur Harvey and David Boyle, respectively.

The following officers of the Section have been elected for the Institute year, beginning May 1st, 1888.

Chairman, William Hamilton Merritt; Vice-Chairman, Arthur Harvey; Secretary, A. Blue; Executive Committee, John Notman, A. Elvins, R. W. Phipps, Dr. P. H. Bryce and A. F. Chamberlain.

A. Blue,
Secretary.

Resolution adopted unanimously by the Geological and Mining Section of the Canadian Institute, at Toronto, on the 26th April, 1888:

Whereas, the late Hon. Thomas White, Minister of the Interior, for years recognized the importance of the mineral and metallurgical interests of the Dominion of Canada, and previous to taking office in the Government ably advocated through the press the desirability of more attention being paid to their development; and whereas, since taking office he has reorganized the Geological Survey so that a division of it may accomplish a practical utility in keeping a record of mining and metallurgical development in Canada, and has also made important and beneficial changes in our mining laws; Be it resolved, that, while expressing the most profound sorrow at his death, the Geological and Mining Section of the Canadian Institute desires to bear record to the great benefits accomplished by the deceased during his short term of office for the mineral interests of the Dominion of Canada; and that a copy of this resolution be forwarded to his son, Mr. Robert White.

Toronto, April 26th, 1888.

ARCHÆOLOGICAL REPORT.

To the President and Council of the Canadian Institute, Toronto :

GENTLEMEN,—Absence from Ontario during the whole of last summer prevented my doing anything archæologically during the year from a strictly provincial point of view, but I am pleased to be able to inform you that the work of collecting at least, has not for this reason been a total blank, as during my residence of nearly five months in the United States I was enabled to gather a considerable number of specimens, many of which differ considerably from the types found in this country, and some being totally unlike anything met with in Ontario.

Having spent all my time in Cincinnati, which may be regarded as the centre of that region which contains so many evidences of the ancient mound-builders' peculiar art, I was afforded several opportunities of gaining such knowledge as may prove serviceable in future should any similar works be discovered within our own territory.

I have especially in this connection to thank Drs. Craig and Collins, of Lawrenceburg, Indiana, for their extreme kindness and courtesy to me, both personally and as your representative. These gentlemen not only conducted me to interesting localities, but they secured for me the rare permission to open a number of mounds and to appropriate for the museum of the Institute anything of value that might be found therein. I regret to state, however, that owing to the unusual wetness of the season our digging intentions were frustrated on three or four occasions, until eventually the weather became too cold. Our gratitude is due also to Mr. Robt. Clarke, publisher, Cincinnati, for casts of the famous Cincinnati or Gest, and Waverly or Clarke "tablets," the originals of which are, in many respects, among the most interesting relics of pre-historic man that have been found in North America. Within recent years one or two writers have attempted to throw doubt upon the genuine character of the former tablet, but the weight of testimony warrants the full belief that the relic in question was actually taken from a mound near the north-east corner of Fifth and Mound Streets, Cincinnati, in November, 1841, and since that time it has remained the property of Mr. Gest, who owned a portion of the ground from which it was unearthed.

Mr. Robert Clarke, the custodian of this precious relic, in his pamphlet entitled "The Pre-historic Remains which were found on the Site of the City of Cincinnati, with a Vindication of the Cincinnati Tablet," has carefully collected all the evidence for and against the genuineness of the "find," and has succeeded in showing conclusively that there is no room for a particle of doubt regarding the authenticity of the tablet in question.

With regard to the Clarke Tablet we learn (quoting from the Journal of the Cincinnati Society of Natural History for January, 1887) that it "was discovered March 12, 1885, by Mr. J. P. MacLean in the collection of Dr. W. R. Hurst, of Piketon, Ohio, was obtained of him and disposed of to Mr. Clarke. . . . . The history of the tablet, as given by Dr. Hurst to Mr. MacLean, is as follows :—'The tablet was taken from a mound on the farm of Abraham Cutlip, about one mile south of Waverly and about three and a half miles north of Piketon, about March, 1872. It was found about three feet from the bottom of the mound on the north side by Abraham Cutlip and David Allan, who were cutting away the mound. Dr. Hurst obtained it from them. The mound was on the second bottom of the river, had been fifteen to twenty feet high, but had from time to time been cut away, so that it was only about ten feet high at the time of the excavation. It was composed of clay. With the tablet were found darts, badges and human bones.' "

Another, called the Richardson Tablet, similar in design to those known as the Cincinnati and Clarke Tablets, was found "on the 31st day of January, 1879, in excavating a mound on the road leading from Wilmington, Ohio, to Harveysburg." An attempt has been made to give to all of these a phallic interpretation, and one writer professes to have discovered in the Cincinnati Tablet a system of time computation as applied to fœtal life.

However much or little of such symbolization the tablets are capable of bearing, the archæological student of Ontario will now have an opportunity to examine for himself in Toronto, with as much satisfaction as if he had the originals before him.

Of the other specimens I procured when away, the following may be enumerated :—

From North Carolina—Three large flints, one fragment of a steatite dish, four fragments of pottery, one pure quartz arrow-head, and thirty-five other arrowheads.

From Georgia—Fourteen arrow-points, mostly of quartz.

From West Virginia—Two smoothly wrought and peculiarly formed implements, one steatite ornament perforated with two holes, one small discoidal gambling (?) stone and four war arrowheads.

From Tennessee—One stone axe and eight flints.

From Mississippi—Seven war arrowheads.

From Alabama—Two rudely-formed axes, one spear-head and eighteen arrowheads of various kinds.

From Kentucky—Two pestles, four grooved axes, five plain axes, one hammer stone, one stone ornament, two fragments of pottery, twelve pieces of corn cobs and some burnt corn, two drills and eighty-six flints of great variety.

From Ohio—Five stone axes, two bone implements, three bone beads, two perforated unio shells, three smoothly-finished stone implements of unknown purpose, one perforated slate tablet, one small discoidal stone, one copper button-like specimen, three flint cores and twenty-four flints of different sizes and shapes.

From Indiana—Eight grooved axes, thirteen plain axes, nine discoidal stones, four fragments of pottery, one partly made axe or hammer, one perforated slate tablet or gorget, two paint-cup stones (?), five flint drills and thirty-three arrowheads. For many of these American specimens we are indebted to Miss Maria Tipton, of Pàris, Kentucky; Mr. E. T. Hummell, of Decatur, Alabama; Mr. L. Deming, of Cincinnati; the Brothers of St. Mary's Institute, Dayton, Ohio; and to others whose names are mentioned in what follows.

From Arkansas mounds—Thirteen whole or nearly whole specimens of pottery vessels, which formed part of a collection made by Mr. C. W. Riggs, of Cincinnati, during the past twelve years. Also five ditto from the collection of Mr. W. K. Moorehead.

Owing to the extreme difficulty of procuring perfect, or comparatively perfect, specimens of earthenware, "modern antiquities" are frequently prepared and sold to the unsuspecting, most of whom are usually found among European tourists and travellers, and as the vessels in question were almost the only articles I procured involving any outlay, I was very careful to make inquiry relative to Mr. Riggs, his antecedents and reputation, the result in every case going to prove him thoroughly trustworthy in all respects. To private collectors and to directors of museums I can confidently recommend Mr. Riggs as not only a gentleman having the largest private collection for sale in the United States, but as one upon whom the most implicit confidence can be placed.

With two exceptions these are the only perfect specimens of earthenware in our collection, all the rest being mere shreds or fragments. Should we be able to secure good Ontario or Canadian pieces in the course of time, those will prove interesting and instructive by way of comparison, and in any event they will form an exceedingly valuable adjunct to our collection as illustrative of the work performed by a branch of the same people who were aboriginal in this country.

For more than a quarter of a century have our American scientific neighbors acted towards Ontario in a most friendly manner, visiting us frequently, carrying off to Washington and elsewhere every specimen worthy of preservation in their cabinets, and it seemed to me only fair even at this late day, to evince a spirit of good fellowship by way of reciprocity. It is therefore gratifying to state that acting upon this principle we have been able to add about five hundred objects of interest to the Provincial Archæological Museum in connection with the Canadian Institute.

Shortly after the issue of our last report a meeting of the Provincial Land Surveyors was held in the Institute. An invitation having been extended to the members of the Association to inspect our cases, Mr. James Dickson, P.L.S., of Fenelon Falls, expressed his pleasure to find that a collection was being made, at the same time informing Mr. Jas. Bain and myself that he had a number of good specimens which he had been saving for years to present to just such an institution as ours, and that he would gladly forward them as soon as he returned home. Mr. Dickson was true to his promise, and it was not long until he expressed to us sixteen axes (one of them measuring fully a foot in length and the others upwards of ten inches), a mortar stone used for grinding purposes, an immense flint weapon or tool, gracefully formed and measuring ten and a half inches long, two very good stone pipes, several clay pipes and fourteen fragments of pottery, with the usual markings.

Other members of the Association expressed their intention to aid the collection as soon as opportunity offered, and when the nature of surveyors' duties is taken into account, it is evident that gentlemen of their profession might do much in furtherance of our archæological project.

About the same time also we received through Mr. John Notman, from a gentleman whose name was not ascertained, three portions of beavers' jaws with teeth, from a grave in Onentisati, Simcoe Co., two bone awls, one trumpet-mouthed pipe-head, and one of cylindrical form, all from the same locality, also two fragments of pottery from Ste. Marie, Simcoe Co.

Early in May, we received a small but valuable collection from the Pike Farm, Wolfe Island, through Dr. Dickson, of Kingston. During many years Wolfe Island has been a favourite hunting-ground for American collectors, and some of the best specimens in their museums are from this place. In several respects there is a marked difference between the materials and forms of implements found in the eastern portion of the Province as compared with those in the west, and the fine specimens procured through Dr. Dickson, added to those we got from Tidd's Island last year, are fairly représentative of that section.

The Pike Farm collection consists of native copper beads, four heavy copper pendants, two small, pointed, copper instruments, two large stone axes (one of which is eleven and three-fourth inches long), one small axe, one small gouge, a slate implement (probably used for skinning purposes), sixteen unusually large flints, sixty-one arrow-heads, two small drills, two excellent stone tubes, three fragments of pottery, four slate tablets, perforated, and one rudely finished bead (?) of black material, flat and approximately circular.

Dr. Orr, of Maple, presented us with three good specimens from the township of Vaughan, viz. : a stone, partly formed in preparation for a pipe-head, a small mortar, of size and shape convenient for being used in the lap, and a small "banner-stone."

What is perhaps the most gracefully formed, and at the same time certainly the most capacious pipe in our collection, was presented to us last spring by Mr. Moon, of Madoc. It was found by a farmer near L. Moira or Hog Lake, within a short distance of the village of Madoc, about two years previously, the find being duly chronicled in the local paper.

From the Rev. Mr. Laboureau, of Penetanguishene, we have received a finger-ring made of brass, on the "seal" of which are engraved the letters I. H. S., in monogram form. It is probably the work of some old French *attaché* to one of those Huron missions, for which that portion of the country where the reverend gentleman is stationed, was so celebrated in the early history of Canada. The ring is contained in a small and neatly made case of recent Indian workmanship.

Only a few weeks ago we came into possession of one of the largest and best private collections in the Province, consisting of upwards of fourteen hundred pieces. Those were brought together by Mr. Wm. Matheson, of Lucan, in the county of Middlesex.

Apart from the extent of this collection, and the important fact that a record has been kept of all the principal articles. it is especially interesting as being so exhaustively illustrative of a limited area, nearly everything in it having been found within the townships of East and West Williams, Biddulph, Blanchard, and McGillivray. It is noticeable that pipes and bead-forms are scarce in this collection, as compared with those found further south and east, but this want is fully compensated by the unusually large number of perforated tablets, bird-forms and other even rarer shapes, of which there are many.

Chief among the objects procured from Mr. Matheson, may be enumerated fifty slate tablets or gorgets, perforated with one or more holes and varying to a great extent in form, seven banner stones, or as they are called in a recent publication emanating from the Smithsonian Institute, "butter-fly stones," thirteen bird-formed amulets (?), two spherical hammers of granite formation (these are encircled with a a deep groove for attachment to a handle), two flat hammers (both notched for handle attachment), six stone pipes, six short tubes, five shell ornaments complete, two imperfect ornaments of the same material, two copper spear or lance heads (one having a tine or prong for insertion in a handle, the other being provided with a socket to receive the handle), one native copper axe, showing unmistakeable traces of native silver, eleven grooved axes, one hundred and eighty plain axes, eleven iron tomahawks, some of them of a different pattern from anything already in our possession, six gouges, and a north-west "shaganappi" covered club. There are also several hundred flints, many of them of considerable size and well formed— others so rudely chipped as to prove admirable examples of the work done in what some writers would fain regard as the paleolithic period on this continent.

The large number of flints and axes in this collection will enable us to do, when opportunity offers, what we have hitherto been unable to perform satisfactorily, viz.: effect exchanges with individuals and institutions in our own and other countries.

From W. Ransom, Esq., England, we have received, through Mr. J. H. Pearce, President of the Biological Section of the Institute, a number of very good paleolithic flints, illustrative of early European "society." Most of these are from Hitchin and neighbourhood, in the county of Sussex, but some are from Persigny, France, and an exceedingly valuable specimen of celt in horn socket, is from one of the ancient lake dwellings in Switzerland.

Mr. Ransom's gift includes also some fragments of Samian ware and two specimens of the Roman stylus (all dug up in the city of London from a depth of ten feet below the surface) three beautiful arrow-tips, from Antrim county, and one from Derry county, in Ireland.

As Mr. Ransom's donation includes nearly all we possess illustrative of the stone age in Europe, we are indebted to him for the opportunity he has afforded us to compare equivalents of the two continents.

A genuine old English "Grey-beard" pitcher from the same gentleman is, perhaps, the only one in any Canadian collection, and will not be devoid of interest to those who fondly regard all that relates to the mother-land.

Owing to an oversight, our last report contained no reference to the gift of Sheriff McKellar, of Hamilton. This consisted of a *brach*, or old-fashioned handmill made by Mr. McKellar's father and used by the first settlers in the Talbot settlement. This *brach* was mounted in a portion of a hollow log, as originally used, and was sent to the Intercolonial Exhibition, London, after its return from which it was deposited with the Institute.

Another pair of *brach* stones was presented to the museum by the sheriff's brother, Mr. Peter McKellar, of Chatham. These two sets are probably the only ones of the kind ever made in Ontario, and it is gratifying to know that they have been preserved "to point a moral and adorn a tale" for coming generations.

Brachs or querns occupy a prominent place in the Archæological Museums of Britain and other European countries. It is not long since they were used in the Orkney and Shetland Islands, and it is said they were employed still more recently in Cape Breton.

Taken altogether, the year has not been barren of results, at least in so far as increase to the museum is concerned. Upwards of two thousand specimens have been added to our cases, and the collection is beginning to assume a character such as to warrant the belief that in a few years the Province of Ontario will possess an Archæological Museum, which, if not what it might have been with an earlier start, will, at all events, go a long way towards placing us upon an equal footing in this respect with other progressive nationalities.

It is needless to repeat here that, but for the small grant made by the Provincial Legislature to assist in this work, we could have done absolutely nothing. The material already in our cabinets is worth many times more than it has cost, and at the present rate of increase in quantity will, in two or three years, require every inch of space in the museum.

Just in proportion as it grows in number, variety and instructiveness, will it become popular, and consequent upon its popularity, we may look for a corresponding increase in the number of donations.

Two of the chief drawbacks to its growth and popularity in the meantime are its situation on a third-story floor, and the impossibility of having it thrown open to the public at reasonable hours. There are probably thousands of people in this city who are totally unaware that there is even a small collection of such objects; but few throughout the province know of its existence, and tourist visitors never hear it mentioned. .

I am not aware that any real progress has been made since last report was presented to you towards the satisfactory solution of the problem relating to the purpose or uses of the many different sorts of objects that for convenience sake have hitherto been known as "banner-stones" and "ceremonial" weapons. There are not a few writers on this subject who express themselves glibly as to the application of almost every specimen that comes under their observation, but the truth is that regarding a large number of types we are totally ignorant of the purposes they served in aboriginal economy. Still we have reason to hope that some light will yet be thrown upon at least a few of the obscurities. In the journal of American Folk-Lore for October-December, 1888, there is a brief article by Mr. Franz Boas, on a "Collection of Ethnological Specimens from Alaska," made "by Lieutenant Emmons, during a five years' stay" in that country. These have been purchased by the American Museum of Natural History, in New York, and we are informed that "the collector has taken great pains to ascertain the meaning of the various implements," as well as to "record the traditions referring to them."

Our knowledge of what have been called ceremonial weapons, gorgets or tablets, and various animal forms has always been seriously at fault, but even the scanty extracts given in the article referred to, from the notes of Lieutenant Emmons, seem to be indicative of something like certainty. For example, the holes so almost invariably found in such objects have always proved mysterious to students, but writing of an ornamented and perforated stone Lieutenant Emmons says: "The holes in this amulet are used to put into them what is picked from the teeth, so that witches will not get hold of it to bring destruction to the person." Although this hint may not serve to explain everything relating to the presence of holes in such objects, it will at any rate give us a clue, and it agrees fully with a vague impression I have long entertained that they were in some way connected with luck.

It is unnecessary to go very far back in our history to meet with similar superstitious beliefs. It is not long since diseased persons, especially children, were passed through the dolmens of Cornwall and Brittany, with the hope that a cure might be effected, and this belief was, no doubt, connected with one concerning witch craft or the evil-eye. Keys, rings and beads have always been regarded as particularly ominous. Among many amulets of a similar kind in the National Museum of the Society of Antiquaries of Scotland, is one (No. 182, Section I) which is "a flat oblong stone, four inches long, by two and three-quarters wide, and less than a quarter of an inch in thickness, notched on the sides, and pierced with two holes one and a half inches apart, formerly used as a charm for the cure of diseases in Islay, Argyleshire," and No. 196 in the same section is a "perforated stone which was hung up in a cow-byre in Cumberland, to protect the cattle from being bewitched." It would be easy to multiply instances relating to the past, and not very difficult to adduce many connected with the living generation.

It appears not impossible that the American specimens hitherto (for the want of better names), known as banner-stones, gorgets, and ceremonial weapons, were nothing more than amulets, supposed to have power against this or that kind of evil spirit, in accordance with the form or device of the objects themselves. Perhaps, also, this class of specimen may be found to include those tubes which have always been a puzzle, and of which our collection contains several fine examples. In the "Personal Narratives" of Humboldt, we find that writer in speaking of articles made from jadestone, remarking that the Spanish planters share the predilection of the Indians for these amulets, which are sold at a very considerable price, the form most frequently given to them being that of the Persepolitan cylinders, longitudinally perforated, and loaded with inscriptions and figures.

When we bear in mind that the Tlinglit of Alaska are less removed from a condition of genuine savagery than are most of the other North American aborigines, it is not unreasonable to expect enlightenment on many points from the notes of an observer like Lieutenant Emmons, who, as Mr. Boas states, "has taken great pains to ascertain the meanings of the various implements."

Since the issue of our first report last year, letters from different parts of the Province have been received by the Education Department, the Institute, and myself approving of the task we have undertaken, and giving information relative to localities and discoveries connected with the pre-historical or early historical existence of the Indians. Want of opportunity has prevented any advantage from being taken of these, but in all probability some original work will be performed next year at a few of the places to which attention has been directed, as well as elsewhere.

I am still convinced that from the five thousand teachers of rural schools in this Province, there is much valuable information to be gleaned. The question is how to reach them. Shall it be by a circular, or by a card in the educational journals? Perhaps both methods should be tried. We need not expect too much at first, but if the subject is kept persistently before the eyes of all who are engaged in rural school work throughout Ontario, there can be little doubt as to the profitable results. Perhaps even one letter from such a correspondent would fully repay all the trouble and expense incident to the plan.

Our collection has now assumed such proportions that it will be necessary to rearrange it, and in some measure to alter the classification. I intend also to paint a number on each specimen, and to catalogue them all. In many museums a number is all that serves to identify the pieces, and constant reference to a catalogue is thus involved on the part of him who wants to get information. This, however, is not my idea of how either to popularize a collection, or to facilitate the work of the student.

Everything possible should be done to enable young and old, learned and unlearned. to examine with pleasure and profit, at the least possible expense of time and trouble. This object can be obtained only by means of copious and legibly written, or printed labels,

It is gratifying to be able to state that as the existence of our collection becomes known so many persons having specimens willingly contribute them to the Museum.

Before this report passes through the press it is hoped that all the specimens will have been rearranged. The area of case room has been fully doubled, and we may now regard our Archæological Cabinets as not unworthy of examination by specialists in this department.

I have, etc.,

DAVID BOYLE.

TORONTO, December, 1888.

NOTES.

We are too much disposed to overlook the fact that there are degrees of advancement in savage life, both with regard to comparative time and to peoples, even neighboring ones, that exist contemporaneously.

It is seldom that in the writings of those who profess to describe the "manners and customs" of the uncivilized we are permitted to get a glimpse of the true, inner social aspect of life. Much is related regarding the predaceous, warlike and religious practices of this or that savage nation—something perhaps about its marriage and burial usages, its costumes, its domiciles and its most striking or peculiar characteristics of any other kind, but as a rule the greater part of such descriptions is superficial, and too often "things are not what they seem." Unseen, because far deeper, lie the originating instincts, the motives and the habits of thought that find only partial expression in what catches the eye or ear of the alien and casual onlooker.

By means of what we now call "folk-lore" something is being done in various parts of the world to put us in touch with the inner life of the simple past and its lingering representative in our own time. The scope of our knowledge has thus been extended in a direction once thought to be too narrow and barren for research, and the results have aided in the solution of not a few ethnological problems. On this continent efforts have been successfully made to collect myths and legends of the Indian race, and the work is still going on, although of course, owing to lapse of time, much has been irrecoverably lost.

The more we learn about the aborigines of this portion of America the more are we brought face to face with the fact that their savagery fell but little short of civilization. Perhaps barbarism would be the best term to employ when speaking about the condition of such people as the Iroquois, and in many respects the Hurons were little, if at all, inferior.

That they were revengeful and blood-thirsty is undeniable, but among the nations they were not alone in this respect. Their manifestation of these qualities was simply less refined than that of others who probably regarded themselves as civilized beings. In social and political virtue they were unsurpassed, and in point of mechanical ability their capabilities and attainments were marvellous. It is extremely doubtful whether any other people in the world, similarly circumstanced, could be compared with them in the latter respect. The variety, tastefulness and workmanship of their relics are amazing.

"Patience and perseverance" are stamped upon most of their productions, for it appears probable that many specimens of their handicraft must have occupied them at intervals during years, or even a lifetime. To take a rough lump of granite or other equally hard material, and fashion it by persistent pecking and rubbing into a symmetrical plain or grooved axe, or to form a bit of huronite into animal semblance for some mysterious use, required a continuity of purpose and a skill in execution no less remarkable than if one of ourselves should undertake to produce a bust with the aid of no tool but a pocket-knife, or a piece of machinery with only a hammer, a saw and a file.

In the art of making coarse pottery they excelled, and the further south we go until we reach Peru, the more do design and workmanship improve. Nothing that was very elaborate seems to have been attempted in this line by the aborigines who inhabited our part of the continent. Here they seem to have contented themselves with plain, serviceable vessels, yet not wholly devoid of ornamentation. This consisted mainly of lines and dots impressed upon the clay when soft, with an occasional variation in the outline of the vessel, such as narrowing to form the neck, flaring of the lip, and the addition of projections of various kind round the mouth. Although immense numbers of earthenware fragments are found scattered all over this Province, entire vessels are very seldom discovered. Farther south this does not hold good to the same extent, but whether this is owing to a difference in the quality of the materials employed in the manufacture, or to the climate and the character of the soil it is not easy to say.

Whilst no doubt among the Indians, much more than with ourselves, there were individuals who preferred articles of their own manufacture, it seems abundantly evident that trades were specialized by them to a considerable extent. The expert in pipes, arrows, etc., would confine himself mainly to such occupations. As corroborative of the remark made in our last report that "to the women, in all likelihood, was allotted the making of earthen vessels," I was informed by Dr. Collins, of Lawrenceburg, Indiana, that there died recently an old woman belonging to a western tribe of Indians, who was said to be the last living representative of her people possessing the art of making pottery of the genuine, old-fashioned description. A friend of Dr. Collins, who was well acquainted with the old woman, persuaded her to make for him six specimens of her art. These he distributed among his friends, one falling to the share of Dr. Collins. I had the pleasure of examining this piece, and but for its comparatively new appearance it seemed to correspond very closely in material, form and ornamentation, with those that are occasionally taken from ossuaries in Canada and the United States.

The ancient people of the lower Mississippi valley were adepts in the production of pottery. The Louisiana historian, Du Pratz, refers to this fact, remarking that he found the Natchez Indians so expert that he got them to make a set of vessels for his own use. "The women," he says, "make pots of an extraordinary size, jars with a medium-sized opening, bowls, two-pint bottles with long necks, pots or jugs for containing hair oil, which hold as much as forty pints, and finally plates and dishes in the French fashion."

Father Marquette, in the account he gives of his voyage down the Mississippi in 1673, says: "They [the Indians of Arkansas] used in cooking, large pots of earth very curiously made, and large plates of the same material, which they employed for a variety of purposes."

Mr. George P. Thurston, in the *American Magazine of History* for May, writes: "Utensils and objects of well-burned clay are found in Tennessee, Missouri, Arkansas and elsewhere, of varied, original and even artistic form, interesting mementoes of ancient life, but they indicate no knowledge of the potter's wheel. They are without glaze, and are but comparatively rude conceptions, fashioned by hand."

The absence of glaze here referred to was, in some measure, overcome by the Natchez, whose "red-stained pottery" is spoken of by Du Pratz, a specimen of which we now have in our collection. A black stain was also used, and vessels are occasionally found whose exteriors are ornamented with patterns consisting of both colors. There is little doubt that this staining vastly improved the serviceable qualities of the pots, besides adding greatly to their appearance, for the material so applied has filled up the pores so thoroughly that the vessels thus treated take a fair polish when rubbed, and are at all times comparatively smooth to the touch.

The following nine figures, now in our collection, represent average specimens of earthenware from mounds in Cross County, Arkansas. They formed part of Mr. C. W. Riggs' exhibit at the Cincinnati Exposition:

POTTERY.

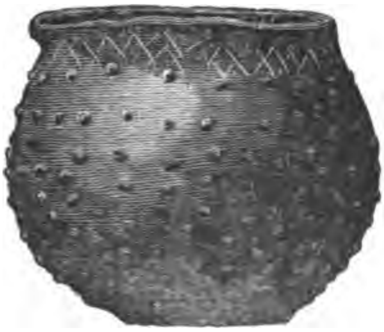


FIG. 1.

Fig. 1 is of the greatest capacity in the lot, its widest diameter being about eight inches. Considering the size its sides are thin. Although the outline is not devoid of gracefulness, the workmanship is rude. The flaring of the lip is not uniform, nor are the walls of equal thickness throughout. Perhaps, the chief peculiarity of this specimen is the ornamentation which consists mainly of small, rounded projections about one fourth of an inch in diameter, and fully an eighth of an inch above the general surface. If these have been made, as is probable, by the material when soft being pushed outwards with the point of a blunt instrument, all traces of this operation have been removed, for the inside is as smooth as if nothing of the kind had been done. Mr. Riggs, had only another specimen ornamented this way in his collection, and he informed me that the pattern was rarely found.

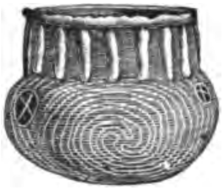


FIG. 2.

Much less in size, but more beautiful in every respect is Fig. 2. Four scrolls cover nearly the whole of the lower portion, and between these are small circles each containing a diagonal cross. The upper part, or neck is relieved with a series of bars extending from the lip to the body of the vessel, and these appear to have been luted to their places after the general form had been completed.

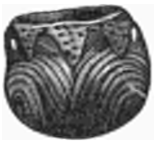


FIG 3.

The scroll design on Fig. 3 is similar to that on Fig. 2, but is more deeply marked, and round the neck are several loops of triangular form attached solidly to the vessel at their lower, or pointed ends, as well as to the lip itself. A clear space between these and the neck left ample room for suspension by means of a cord, but perhaps the intention was simply an ornamental one.

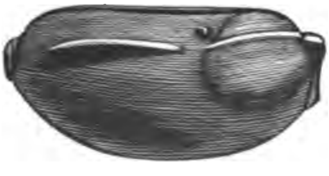


FIG. 4.

Fig. 4, nearly eight inches in diameter is fairly imitative of a frog, although the cut does not bring this out very clearly. In fact the legs and even the toes are plainly modelled, and the protuberant eyes are well marked. Otherwise the specimen is perfectly smooth on the surface.

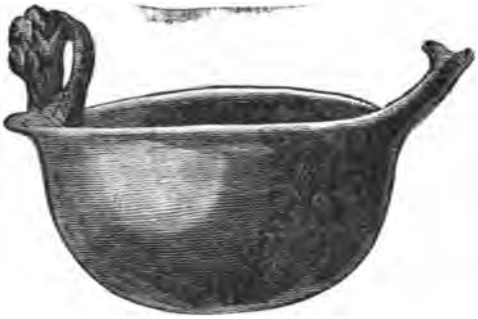


Fig. 5.

There has been a more pretentious attempt in the direction of art in Fig. 5. The handle, at the left of the cut, has certainly been a head of some sort, but whether a human one, or that of some other animal, it is now impossible to say, as the front portion has been destroyed. The projection on the opposite side has also been broken, and we can only imagine what it may have been. The body of the vessel is very well formed, and the burning has been better done than is often the case.

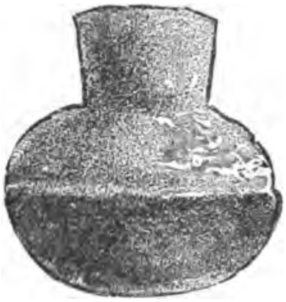


Fig. 6.

Fig. 6 is almost classic in outline, and is peculiar in having a slightly raised cincture or band round the middle of the body. The neck is not now full length, some pieces having been broken off, but it was probably never more than half an inch longer.

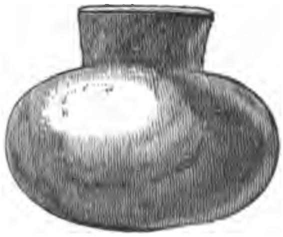


Fig. 7.

So far as shape is concerned Fig. 7 is a gem of aboriginal ceramic art. Its outline is almost perfect, and no attempt whatever has been made to ornament it. With the exception of a small fragment from the lip, this specimen is in every respect as good as on the day it was finished.

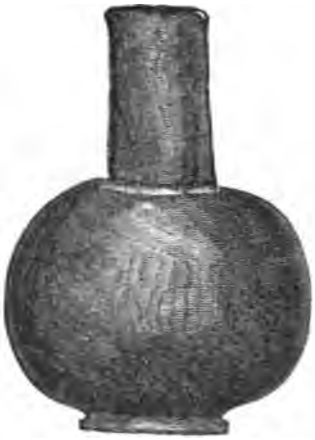


Fig. 8.

Fig. 8 is equally beautiful in form, and is remarkable both for the great length of the neck, and on account of having a well-made collar round its base to give it solidity when standing. Even here, however, there is no sign of the potter's wheel having been known—a close examination merely showing that the work has been done wholly by hand, but with infinite pains to make it as true as posible. The surface is free from markings.

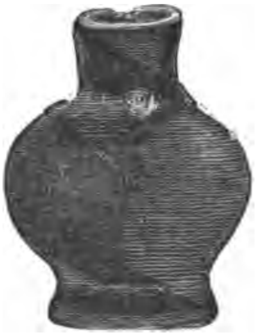


Fig. 9.

Fig. 9 is a specimen of the " red-stained pottery " mentioned by Du Pratz. Some pieces have been broken from the lip, and a chip has been knocked off the side. These fractures enable us to see that the red-stain did not penetrate beyond the surface. Here also, as in Fig. 8, there is a well-formed base giving the vessel quite a modern appearance so far as shape alone is concerned.

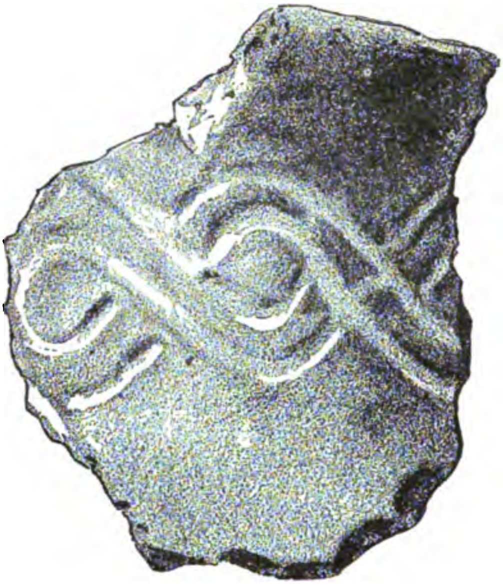


FIG 10.

The fragment here figured was presented to us with other things by the Society of Natural History of Cincinnati, and was found near Madisonville, Ohio, a neighborhood which has furnished many thousands of the finest relics that enrich the museums of the world.

The simplicity and beauty of the design (Fig. 10) are unique. The pattern is totally unlike the normal lining traced by the Indian on clay vessels, and indicates a taste considerably in advance of what is usually exemplified in ornamenting pottery, or, indeed, anything else.

CLAY PIPES.

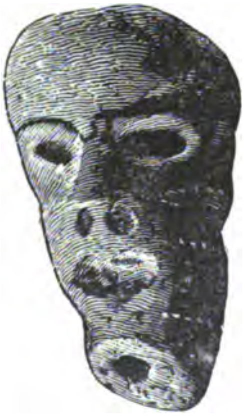


FIG 11.

Fig. 11 differs considerably from most aboriginal attempts to imitate the human face. It has been moulded in strong relief—the superciliary ridges are very prominent, and the eyes, nostrils and mouth are deeply depressed. As is often the case, the face has been made to look towards the smoker when the pipe was in use. Unfortunately the stem of this pipe has been broken and lost.

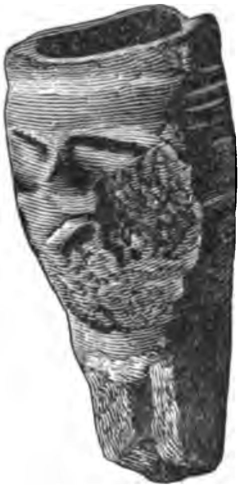


FIG. 12. (Nearly full Size).

We seldom associate a sense of humor with Indian character, but Fig. 12 would appear to indicate that the maker of the pipe represented had some of this quality in his composition. The eyes and mouth are set awry and at different angles, giving an exceedingly comical air to the face—much more so, in fact, than is brought out in the engraving. This was presented to us by Master Theophilus O'Connor, of Glen Huron.

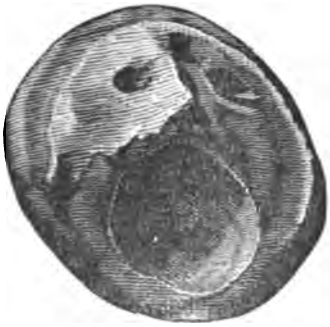


FIG. 13. (4·5 size).

If another illustration of aboriginal humor is wanted we have it in Fig. 13. This represents the top or upper edge of a clay pipe, the open mouth of the human face forming the bowl. This is a unique specimen so far as the design is concerned—at least

I have not heard of anything similar elsewhere. It was found in Nottawasaga by Master Herbert O'Connor. The figure is only about four-fifths of the full size.

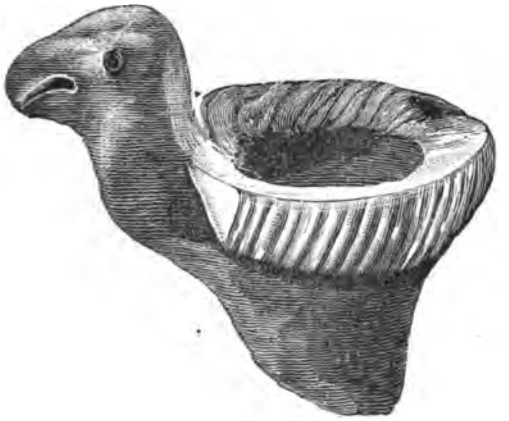


Fig. 14. (Full Size.)

A very fair imitation has here been made of the head of a bird of prey. This clay pipe (Fig. 14), is from the township of Nottawasaga, and was presented to us by Mr. Albert Lougheed. Unfortunately, the break prevents any certainty as to how the stem pointed, but very likely it was in the same direction as the beak. The lip of the bowl is of more than the usual thickness in Huron pipes.

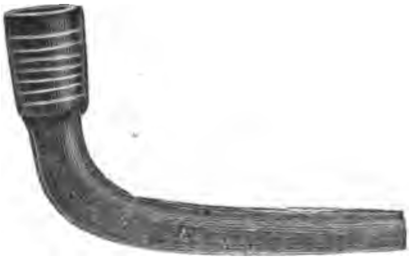


Fig. 15.

The very slender-looking pipe figured here is one of the few almost perfect clay specimens in the museum. Fig. 15, is only about one-fourth of the full diameter, having been too much reduced by the engraver; still, the proportions are correct. In the making of such curved stems, it is probable that a flexible twig or other vegetable stalk was introduced through the entire length when the clay was straight, or else the material has been moulded round a bent core, and in either case the burning has been effected with the core in position, so that when this operation was completed the hole was left perfectly clear. This fine specimen is from the Baby farm at Lambton, where it was found by Mr. James Kirkwood.

STONE PIPES.

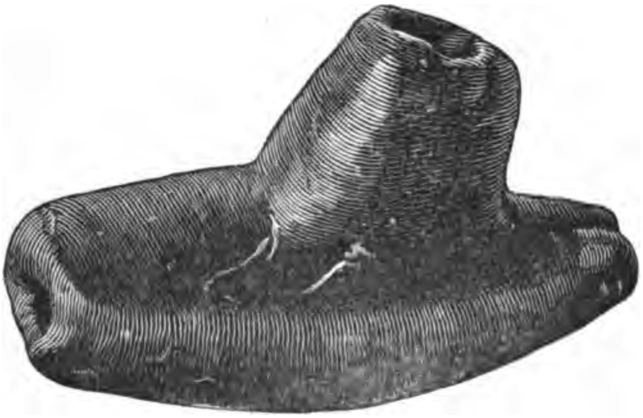


FIG 16. (full size).

Fig. 16 was presented to us by Mr. W. G. Kidd, Public School Inspector, city of Kingston. It is made of steatite or soapstone, a material plentifully found both *in situ*, and as "drift," and one which is easily wrought. This pipe is by no means symmetrical,

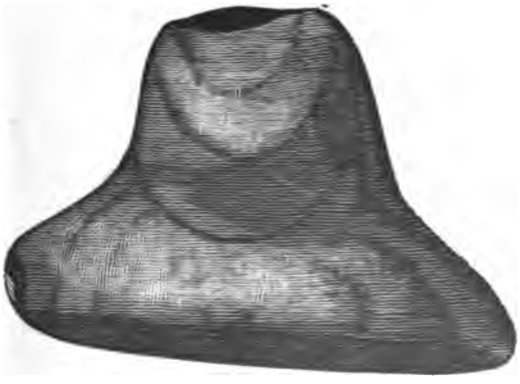


FIG. 17.

for not only does the bowl slope backwards from the stem end, but it inclines considerably to one side when the base rests on a level surface. The workmanship is very rude and the type is regarded as one of the oldest. Compared with Figs. 17 and 18, as given in the report for 1887, it would seem almost to complete the series from the rudest to the most elegant form in this class. It was found under a pine stump in the township of Pittsburg, county of Frontenac, not far from the St. Lawrence.

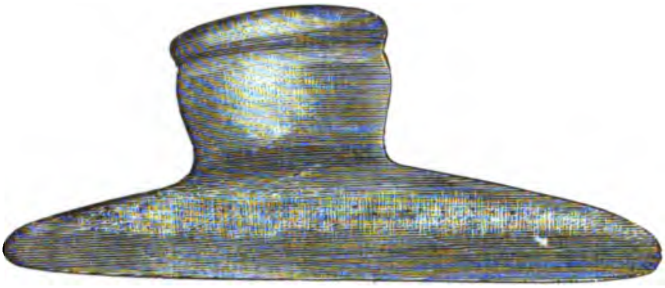


FIG. 18.

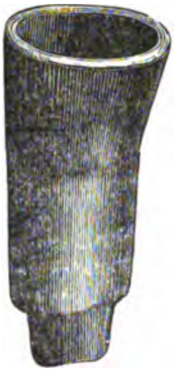


FIG. 19. (½ Size.)

Fig. 19 is a very good specimen of plain pipe-head. As it is quite black and smoothly finished, the nature of the stone cannot well be ascertained without injury to the appearance. It is perfect in every particular. The short stem-piece being intended for the insertion of a wooden tube. The appearance of the pipe thus complete would be very much like that of a cigar-holder. It was found by Mr. Wm. Bradley, of McGillivray township, on the Grand Bend of the Sable River, and formed part of the collection purchased from Mr. Matheson, Lucan.

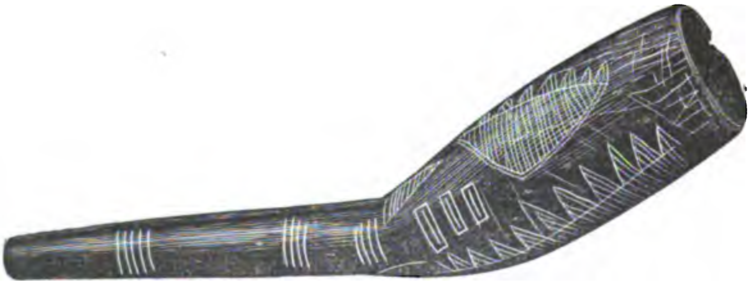


FIG. 20.

In pattern and finish, Fig. 20 is as far removed as possible from the Pittsburg specimen. This gracefully formed pipe is almost as perfectly round and smooth in the bowl as if it had been produced in a machine. The stem is a flattened oval—the upper and lower being the compressed sides. The wall of the bowl is no thicker than that of an ordinary clay pipe, and, with the exception of a small chip out of the lip, the specimen is absolutely perfect. Its total length is seven inches. The greater portion of its surface is covered with delicate markings in which many people profess to see a pictograph representing wigwams, fortifications and tallies. This pipe is also made of steatite. It was found on the bank of Lake Moira, or Hog Lake, a few miles from Madoc, and was presented to the museum by Mr. Moon, of that village.

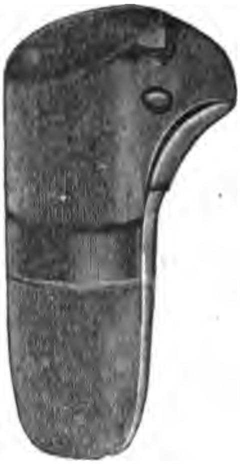


Fig. 21. (4-5 Size).

This pipe (Fig. 21) is also a well finished specimen. It seems to have been modelled from the head of a hawk or eagle. The material is quite black. There is a hole at the back for the insertion of a stem. This specimen was found by Mr Frank Scott, London township, and formed part of Mr. Matheson's collection.

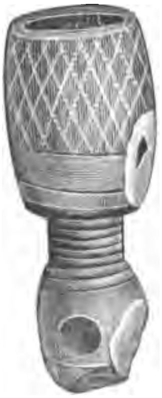


Fig. 22.

Fig 22, from the same collection, was found on the farm of Mr. Thomas Stanley, township of McGillivray. It is of a light, fine grained stone, and has had much labor expended upon it. The lozenge pattern on the upper portion of the bowl is accurately worked; the rings forming the neck are almost perfectly true, and the circular form is so correct that one is apt to conclude that the pipe must have been made with the aid of a lathe. As seen in the engraving, two chips have been knocked off this otherwise perfect specimen—one from the upper and one from the lower part.

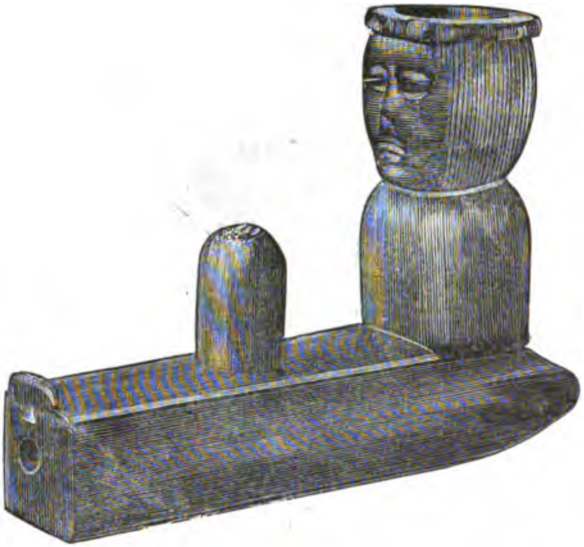


FIG. 23. (⅜ Size).

Fig. 23 is another from the Matheson collection. The material is limestone, which has been rendered perfectly black exteriorly. The head and shoulders forming the bowl are circular, but the stem-holder is square. There is no attempt at detail in ornamentation beyond the rudely formed features of the face. This very good specimen was found at Hope Bay (near Wiarton), in the county of Grey, by Mr. John Hewton.

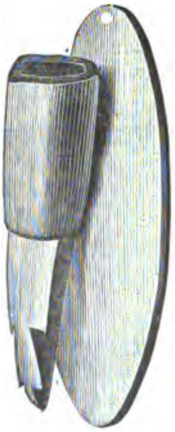


FIG. 24.

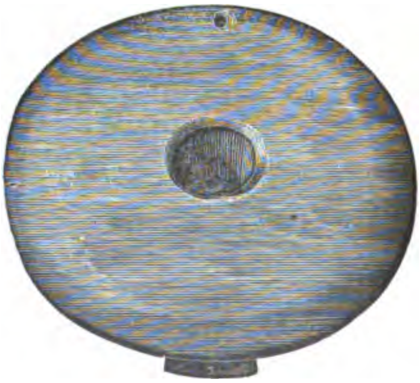


FIG. 25 (Size, 3½ inches).

The very singular pipe figured here (Figs. 22 and 25) dispels former doubt relating to Fig. 26 which appeared in last report.

It is quite certain that this is a pipe. It is constructed on the same plan as Fig. 26, but with much better effect. It is made of a fine-grained sandstone. The disc is three inches and a half in diameter, comparatively thin, and the bowl is detached from the disc except in the centre, where it communicates with the large stem-hole from the opposite side, as seen in Fig. 25. The lower half of the bowl-piece is wholly ornamental, and it is noticeable how nearly the design corresponds with the lower end of Fig. 26; the one however, belonging to the bowl and the other to the disc. At the edge of Fig. 25, just above the mouth of the bowl, is a small hole, as if for suspension, and this probably was the way it was carried, serving, no doubt as a bit of personal decoration when not otherwise in use. This beautiful and unique object was found by Mr. James Cluness, on his farm in the township of West Williams.

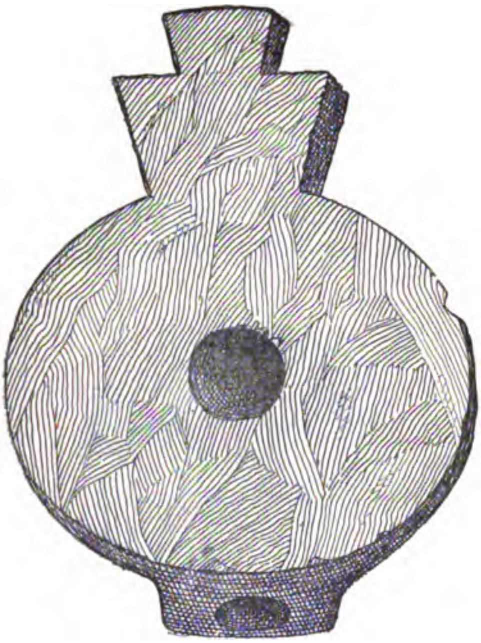


FIG. 26.

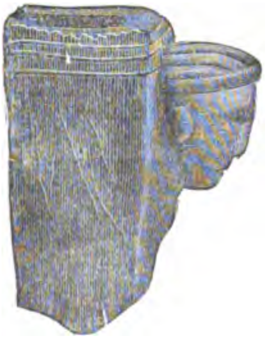


Fig. 27.

The tastefulness of design and treatment of subject in Fig. 27, are suggestive of an aboriginal Michael Angelo. The material of which this pipe is composed, is a hard, compact limestone. The bowl proper is, in its cross section, square, and the sides are straight, the width at the mouth not greatly exceeding that of the base. The head, which is so exquisitely carved on the front side, shows nothing characteristic of Indian physiognomy. Every feature is well brought out, and the finish of the workmanship is of a very high quality. This pipe is perfect in every respect. There is a stem-hole at the back. Fig. 27 is from the celebrated Lougheed farm, in Nottawasaga, and was presented to the museum by the finder, Mr. Albert Lougheed.

IMPLEMENTS OF STONE.

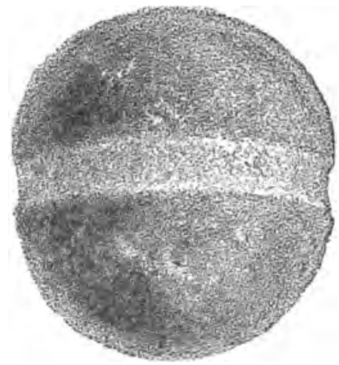


Fig. 28. (½ Size).

Dependent, as the former people were, mainly on stone for their tools and implements, they were quick to perceive in water-worn pebbles such shapes as might be readily adapted or modified for specific purposes. The museum of the Institute contains many specimens of this description. Naturally, most stones of the kind in question are oval or spherical, and as these required comparatively little labor to form hammers or club-heads, every first-rate specimen found was, no doubt, appropriated for such purposes. These stones in their natural condition are often found in graves where they have been deposited with finished articles, as if to furnish material for use in the spirit land. Sometimes without the expenditure of a single blow on them, they were encased in raw-hide and attached to the end of a handle, but frequently a groove was cut round the middle for the reception of a stout leather thong, the ends of which were firmly wound about a shaft. Fig, 28, procured from Mr. J. Wood, Lawrenceburg, Indiana, is a good example of the latter method, intentionally. Most of the surface possesses the appearance so characteristic of water-wear and subsequent weathering, but the aboriginal finder had begun to peck a groove all round, as is perfectly evident from the lighter color and sharper outline of the markings, as well as from the slight depression itself.

Stones of the kind referred to are frequently picked up in fields a long distance from water-courses, and are highly prized as Indian relics by youthful collectors, who cannot account for the symmetrical forms and smooth surfaces otherwise than by attributing these to human skill ; but unless such specimens are found along with what are unmistakable objects of Indian art, they are totally valueless, except as geological curiosities.

Of a simple adaptation in this line Fig. 40 is a good example. It is a flat water-worn stone, originally ovate marginally. Near to the smaller end notches have been chipped for the purpose of fastening a handle, and it is evident that the intention was to make use of it as a temporary working hammer, or as a club-head for less innocent purposes. Two of these form part of our collection.

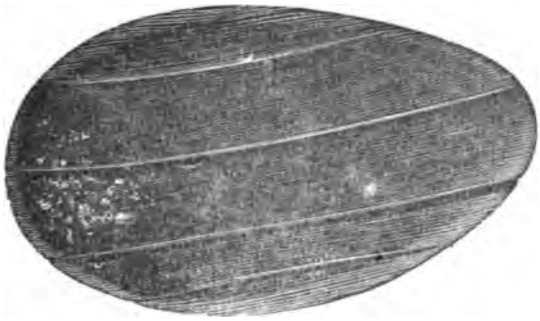


FIG. 29. (full Size).

Fig. 29 is composed of a fine, close-grained argillite, cut deeply on both sides, as if for the purpose of being broken off to form beads. Other specimens in our cases illustrate the same treatment, but this is interesting as shewing the advantage taken of a water-worn stone for the purpose of economizing labor. The other specimens referred to have been rough blocks, which were first smoothed on the larger parallel sides before the cutting was begun. (See Fig. 37). Fig. 29 was found by Mr. Richard Prance, on the eighth concession of McGillivray township. From the Matheson collection.

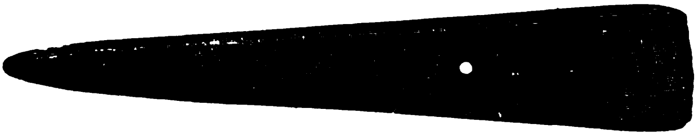


FIG. 30. (Full Size)

This specimen (Fig. 30) is somewhat peculiar. It is made of blue slate, and has been sharpened to a chisel edge at the wide end. The small end is carefully rounded, and the whole of the object is well finished. As a cutting tool it would be useless, and the presence of the hole rendered it too weak for any operation requiring much pressure. Perhaps it was worn as an ornament, or as a button or pin to fasten clothing, and might

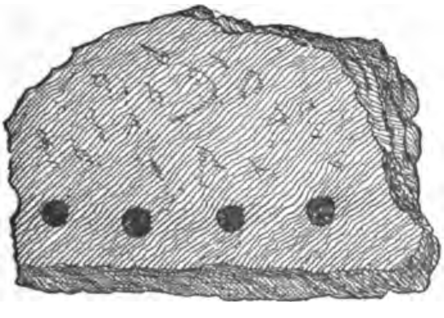


FIG. 31.

also have been used to mark patterns upon earthenware, fragments of which in the museum have certainly had the aid of some such instrument in their ornamentation.

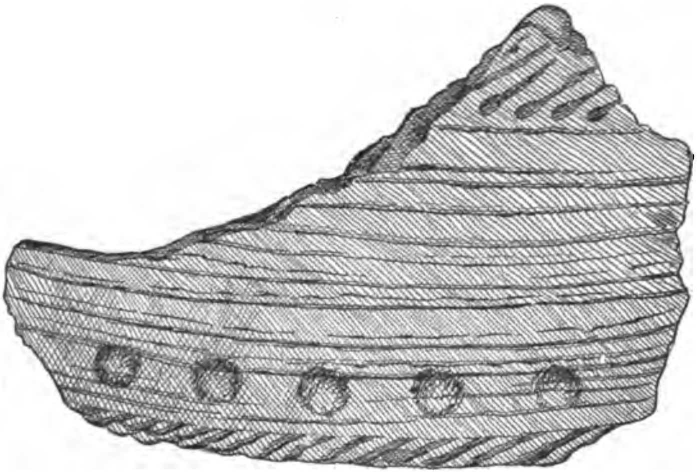


FIG. 32.

Fig. 31 shows where a tool having a pointed end like Fig. 30 has been pushed into the clay from the inside of a wide-mouthed pot, and Fig. 32 exhibits the effect of this operation on the outside. Both pieces are fragments of the same vessel.

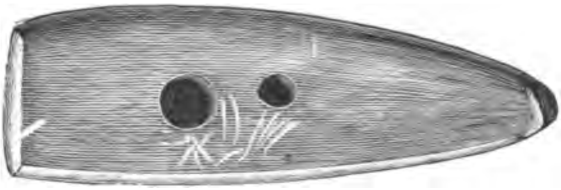


FIG. 33. (⅔ Size).

Five other specimens that I regard as having been similarly used, were recently presented to the museum by Mr. A. F. Chamberlain, M.A., he having procured them from a Mr. Stevens on Noncon Island, Lake Scugog. The one figured (Fig. 33), was found in a grave along with a copper axe, stone axe, slate tablet, bone spear, and other articles including a piece of pure plumbago.

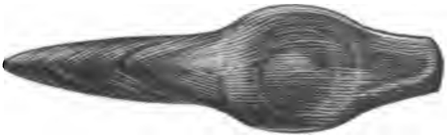


FIG. 34. (¼ Size).

Fig. 34 is very unusual in form, and the only use that suggests itself to me is that of a pottery-marker. One of the noticeable features of Fig. 34 is that it has not been bored. It is from near the city of Hamilton, in Butler county, Ohio, and was procured from Mr. W. K. Moorehead, now of Washington. The material is veined blue slate.

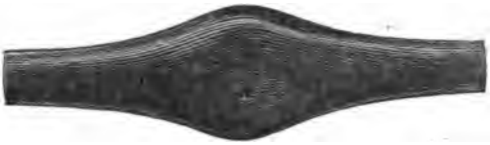


Fig. 35. (¼ Size).

Fig. 35 is from Shelby County, Ohio, and was presented by Mr. Moritz Fischer, Curator of the Kentucky State Museum, in Frankfort. It is of argillite, like Fig. 34, is flat on one side and rounded on the other. On the lower, or flat side, a beginning has been made in the boring of two holes, each about three-fourths of an inch from the middle, and in the direction of the ends.

Another specimen, somewhat similar in shape in our collection, is from Mason county, West Virginia.

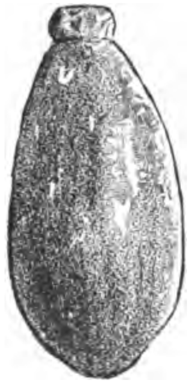


Fig. 36. (½ Size)

Fig. 36 belongs to the class of stone relics commonly known as "sinkers," but was more probably a personal ornament—a pendant of some sort, the notch or neck answering one of the purposes usually served by a hole. In this respect it corresponds with the hematite specimen, Fig. 78. This stone was found in W. Middlesex.

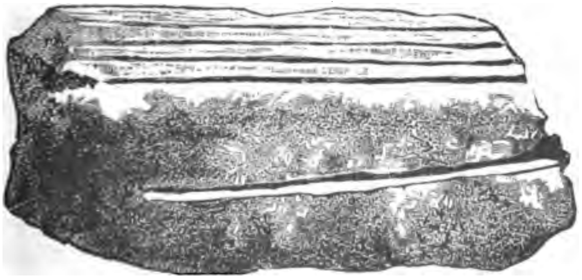


Fig. 37. (About ½ Size.)

This is an instructive specimen, showing some of the steps taken preparatory to making red sandstone or freestone beads. The rough block has been smoothed on two sides, and long cuts have been made for the purpose of procuring pieces suitable for boring. We have several finished beads of this material in our cases, from the counties of Simcoe, Wentworth and Middlesex. Fig. 37 is from the Lougheed farm, Nottawasaga.

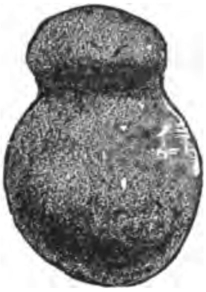


Fig. 38.

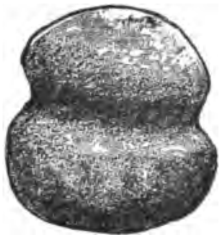


Fig. 39.

Stone hammers, like those figured (Fig. 38 and 39), are not often found. Fig. 38 is of limestone and Fig. 39 is of granite rock. It will be observed that the groove in Fig. 38 is between one-third and one-fourth of the whole length from the top, while that of Fig. 39 is in the middle, although, owing to preponderance of bulk, the lower end of the latter is also the heavier. It does not seem at all likely that these tools were employed to strike anything harder than wood, and perhaps the chief use to which they were applied was the driving of stakes in connection with the building of wigwams or "log-houses," or in fastening poles in the ground for fortification purposes. Fig. 38 was found 42 miles north-west of Brandon, Manitoba, by Mr. Titus Andrews, and Fig. 39 at Point Edward, Ont., by Mr. Louis Earnest. Both were procured from Mr. Matheson.

The former specimen is six and a quarter inches long and f ur and a quarter wide, while the latter is five inches long and four and a half inches wide.

A hammer of this kind found in Ohio weighs sixty pounds.

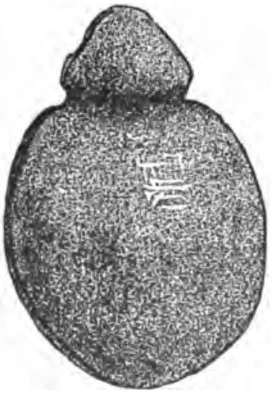


Fig. 40.

Fig. 40 is quite different in construction. It is simply a flat water-worn stone, measuring not more than an inch and a quarter at the thickest portion, and of soft shaly limestone.

Advantage has been taken of the natural ovate form to cut notches near the small end for the attachment of a handle, but it could have been intended only for temporary use. It is a little over eight inches long and nearly five inches in width. A smaller

one of the same kind is in the museum. Fig. 40 was found on lot 15. con 2, Biddulph and was procured from Mr. Matheson.

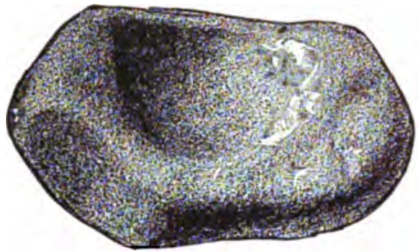


Fig. 41 (¼ Size.)

Fig. 41 is a hollow limestone pebble. Stones in this condition are usually spoken of as "paint-pots," or "paint-mills," the supposition being that the work of hollowing has been performed artificially, and that the Indians employed them for grinding or holding the paints they used for personal decoration. While it is not improbable that some of these stones were employed for such a purpose (especially when they are found associated with other articles in graves), it is more likely that their peculiar form is the result of the action of water. The hollow has formed the matrix of a fossil which, having dropped out, subsequent attrition of sand and gravel in a water-course speedily deepened, rounded off and left smooth.

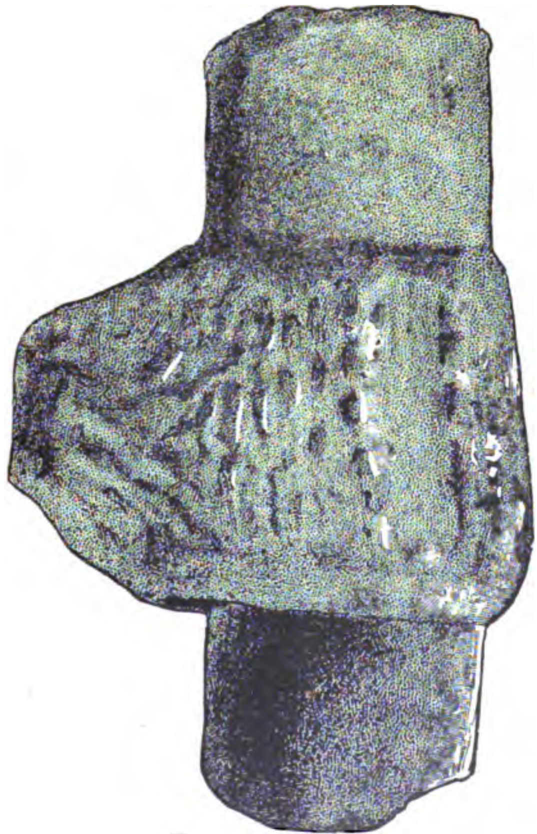


Fig. 42. (Full Size.)

Fig. 42 is part of the small European collection presented to us by Mr. W. Ransom,

Hitchin, Sussex, England. The upper three-fourths consist of deer horn, into which a deep hole has been worked from the under side, forming a socket in which there is fixed a small stone celt, identical in form with many that are found in this country. The handle, to the left, has almost wholly decayed, leaving only what is shown in the cut, unless indeed we regard the implement as a chisel, in which case the upper end would have been the part held in the hand. This specimen is from a lake-dwelling in Switzerland, and is introduced merely for comparison with our own.

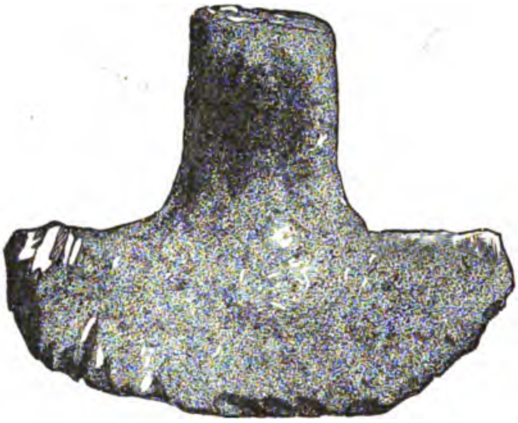


Fig. 43.

Fig. 43 has evidently been employed as a cutting tool, the neck having been fixed in a socket or otherwise fastened to a handle. The type is of very rare occurrence in America. Many European collections contain highly finished symmetrical specimens. This one is from the County of Middlesex (where it was found by Mr. Delaney), and was procured from Mr. Matheson.

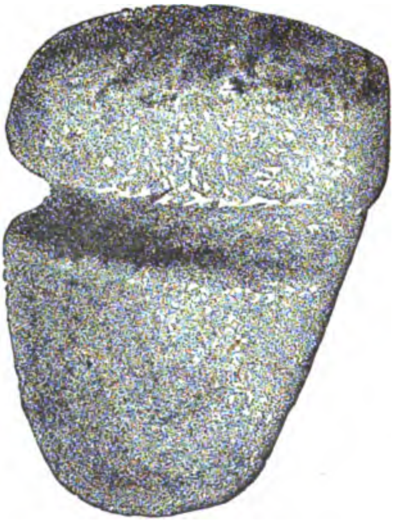


Fig. 44.

Grooved axes are rare in Ontario as compared with Ohio, Indiana, Kentucky and some neighboring States. In most cases also with us, the channel has been cut all the way round in implements of this kind. To the south of us, however, in the larger number of these axes one of the narrow sides (probably the rear one when in use), has been left ungrooved, and occasionally specimens are found having the ungrooved edge slightly furrowed longitudinally, suggesting the idea of a wedge having been employed to tighten the tool when it became loose in its withe handle. The excellent axe shown at Fig. 44, is one of two procured through the kindly offices of Dr. Craig, Lawrenceburg, Indiana, from Mr. Rajon, J.P., of the same city.

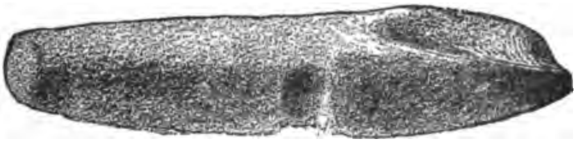


FIG. 45.

Gouges are seldom grooved. Fig. 45 is an exception. The inference is that this specimen was intended to be fastened to a handle. No signs of abrasion, however, are to be seen about the groove, but this may be owing either to the effect of "weathering" or to the tool not having been much used after it was made. The latter is the more likely supposition, as the "bit" is quite sharp and smooth. Fig. 45 is fully eight inches long. It was found on lot 18, con. 7, McGillivray township, by Mr. John Taylor.—Matheson Collection.

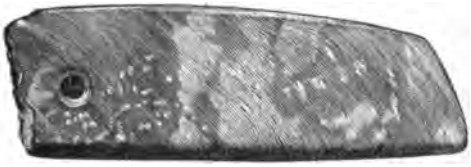


FIG. 46. (½ Size.)

There can scarcely be any doubt that Fig. 46 was intended to be used in the dressing of skins. The material is slate, and the lower edge has been sharpened by rubbing or grinding wholly from one side—like a carpenter's chisel. The hole was for convenience in carrying. Fig. 46 is nearly a perfect specimen in every respect, and is especially interesting as having been found within the city limits. It was taken from a cutting on Withrow Avenue by Prof. W. H. Vander Smissen and myself in the summer of 1887.

FIG. 47.

A considerable number of those mysterious stone tubes have been added to our collection during the year. Two of the best are from Pike's farm, Wolfe Island. They are made of a fine-grained, buff-colored stone, very much like the lithographic stone of commerce. The diameters of the two are nearly the same, but one is only half as long as the other. The longer one, measuring eight and a half inches, is shown at Fig. 47. Both of these differ from the common form of tube in the hole being more than twice as wide at one end as at the other. In Fig. 47, at the end showing the hole, the wall of the tube is scarcely one-eighth of an inch in thickness, while at the opposite extremity it is twice that. In addition to this the sides, although beautifully rounded, are not parallel throughout their full length, as the diameter increases slightly (but only slightly) at the end where the hole is enlarged.

It is probable that, like the "gorgets" and "ceremonial" stones, the tubes were regarded as being both ornamental and lucky. Were they ever employed as pipes? Even if it could be shown that they had some specific use, the element of superstition would still have to be taken into account, as we have the authority of Schoolcraft and others for believing that all, or almost all, the decorative "environments" of the Indian were looked upon as being more or less in the nature of amulets.

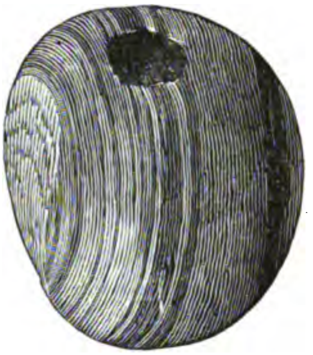


Fig. 48.

We may consider Fig. 48 from the same point of view. It is fashioned from a piece of thick and richly-veined slate—spherical except on one side, which has been made slightly concave in line with the hole which penetrates the piece. It was found on lot 20, con. 18, West Williams, by Mr. Alex. Thompson.

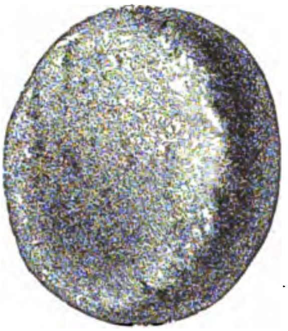


Fig. 49.

Fig. 49 is an unfinished specimen of the same kind, but of different material. A beginning has been made in the drilling of a hole in what is clearly a water-worn stone. It is from Brookfield, Missouri, and was procured from Dr. Rear, Toronto.

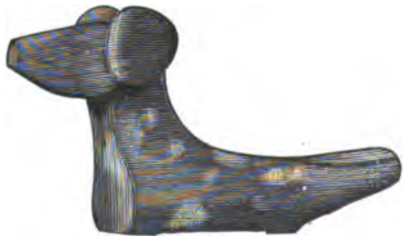


Fig. 50. (½ Size)

The purpose or intention of objects like Figs. 50 to 52 is yet unexplained. Mr. Wilson of the Smithsónian Institute, at Washington, in a recent pamphlet states, that an Ojibeway Indian had informed him they were employed in playing a game of chance. This sage Indian affirmed that several of them were put into a vessel and shaken up. The vessel was then inverted like a dice-box, and the count was reckoned for or against the player, in accordance with the number found standing or fallen when the vessel was removed. There is more than one reason for believing that the Ojibeway was a mere guesser at truth, and a very poor guesser too. 1st, because the bases of some are rounded off so much, or are so narrow, that it requires careful adjustment to make them stand at all. 2nd, many are top-heavy and therefore easily overbalanced. (Fig. 51 is illustrative of this, and of the convex base.) In the third place, what is perhaps the strongest reason why these objects were not so employed, consists in the fact that they seldom show any signs of abrasion. On the contrary, they are, of all relics those that are most frequently found in the best state of preservation. Other reasons might be adduced, as, for example, that these bird-forms are chiefly made of slate, or some equally fragile material. Fig. 50 however, is an exception to this, it being formed of huronite, a very hard and refractory kind of stone. Our collection contains another of these bird-forms, made from the same material.

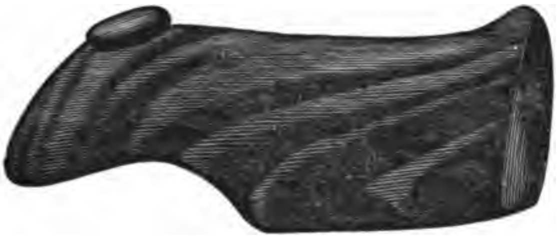


Fig. 51. (½ Size.)

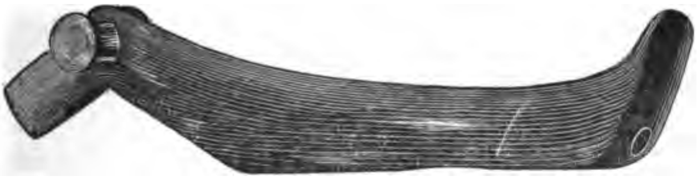


Fig. 52. (½ Size.)

In Figs. 50 and 52 the eye pieces stand out from the head like cuff buttons having a long and substantial stalk.

Fig. 51 is the only specimen of the kind I have seen having a projection on the crown. These three are from the township of West Williams. Fig. 50 is from the farm of Mr. Archibald McEwan; Fig. 51 from that of Mr. W. H. Johnston, lot 9, con. 21; and Fig. 52 from Mr. Robert Gray's property, on the 18th concession. They are part of the Matheson collection.

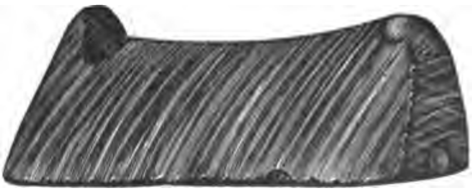


Fig. 53 (½ Size.)

Forms similar in material and construction but without any pretence at the imitation of birds or other animals are not uncommon. Fig. 53 is an example, but many of them are quite plain, being flat on one side, and round on the other, with the ends at right angles to the sides. In every case these and the bird-forms are perforated at each end of the base or flat side, the holes being bored diagonally as in Fig. 53, but where bars are formed across each end, as if in imitation of feet, the holes penetrate these in the middle and at right angles to them in the direction of the object's longer axis.

Schoolcraft described all such specimens (Figs. 50 to 53) as knife-handles, but as no blades have ever been found showing any arrangement for attachment to articles of this sort, it must be concluded that this was not their purpose.

It seems more probable that they and the perforated tablets—perhaps also the stone tubes—were worn partly as articles of personal adornment and partly as amulets or luck-stones, and we can ill afford to smile at the superstitions of the aborigines in this or any other respect so long as we have among ourselves persons who keep coins (known as pocket-pieces) for luck; who carry horse chestnuts to ward off rheumatic attacks, and who suspend old horse-shoes over their doors, for what?

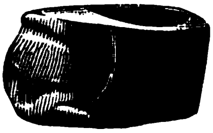


Fig. 54. (⅔ Size.)

Fig. 54 is one of the incomprehensibles. Although small and unfinished a good deal of labor has been spent upon it. The material is that light grayish-blue slate, so much in favor for perforated tablets, and what we call "ceremonial" weapons. An oval cavity has been made on the upper side, and at the end facing us in the cut a beginning has been made in the carving of a human face. But the further end is the most instructive part of this object, for there we are able to perceive the method employed to detach it from another piece. A thin flake of flint has been used as we would use a file to make a deep incision all round, and when the part has been sufficiently weakened the two pieces have been forcibly broken.

It should not be omitted to state that a hole has been bored through this stone from the bottom of the cavity already mentioned.

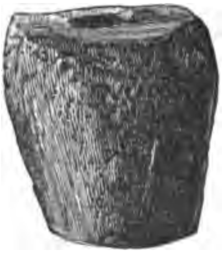


Fig. 55.

Another slate object is shown as Fig. 55. It measures three by two-and-a-half inches, and looks as if it had been intended for a pipe. Boring has been done from both ends, but the holes have not met. It was picked up on lot 18, con. 6, McGillivray Township, the farm of Mr. Wm. Meikle.—Matheson Collection.

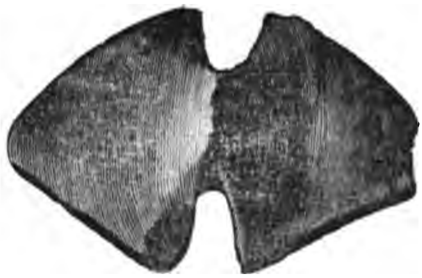


FIG. 56 (nearly full size.)

The smallest example of the banner stone in our collection is figured above. With the exception of a piece off one point it is perfect. It was found in the Township of Vaughan, in this county, and was presented to us by Dr. Orr, of the Village of Maple. The doctor is an enthusiastic collector, and has in several ways shown his good feeling towards our museum.

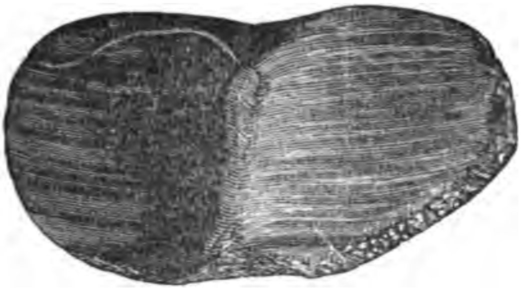


FIG. 57.

An unfinished specimen of slate, winged relic is shown at Fig. 57. It is valuable chiefly as another proof that the Indians did not perforate their work until is was almost or wholly finished. The presence of a few flaws on this specimen at critical places may have led to its rejection by the maker. It was presented to us by Dr. Craig of Lawrenceburg, Indiana, but came from Kentucky.

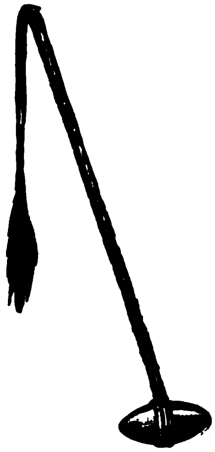


FIG. 58.

Fig. 58 is from our North-West Territory. Weapons of this kind are still in use among the Indians of Manitoba and more western districts; or perhaps it would be more correct to say that such articles are now mainly manufactured for sale as curiosities. With the disappearance of large game, skull-crackers of this description have become useless. The head is commonly fashioned from quartz or some other hard kind of stone. Generally they are about as accurately formed as if they had been turned. A groove is cut round the middle, and a thong of raw-hide encircling this and being bound tightly to the handle keeps the head firmly in position. The heads are from four to six inches in length and from one-and-a-half to two-and-a-half inches in diameter. The handle, including its leather covering, seldom exceeds three-fourths of an inch in diameter and is usually about three feet long. A foot or more of loose raw-hide extends beyond the handle. Besides being ornamental this was useful for wrapping round the hand before grasping the shaft, giving a much firmer grip. Since Fig. 58 was engraved we have been presented by the Rev. John McLean, M.A., of Fort McLeod, with a very handsome modern specimen of the "tommy-stick," as such a weapon is sometimes called. It is highly finished, and a pattern cut in the stone has been inlaid with lead. Mr. McLean has, besides this, presented the Museum with a large number of valuable articles illustrative of modern life among the Blood Indians, connected with whom he has resided for nine years. Further reference to these articles must be deferred until the issue of the next report, as they are not now available for description.

BONE.

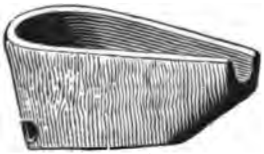


FIG. 59.

Among the articles of Eskimo manufacture mentioned in last report as having been presented by F. F. Payne, Esq., we have a set of "men" resembling dominoes, a number of carved figures representing a fish, a bear, a seal, a goose and two human beings. Besides these were a comb, a thimble, some ornaments and a powder measure—all made of bone. The last mentioned is illustrated nearly full size at Fig. 59.

SHELL.

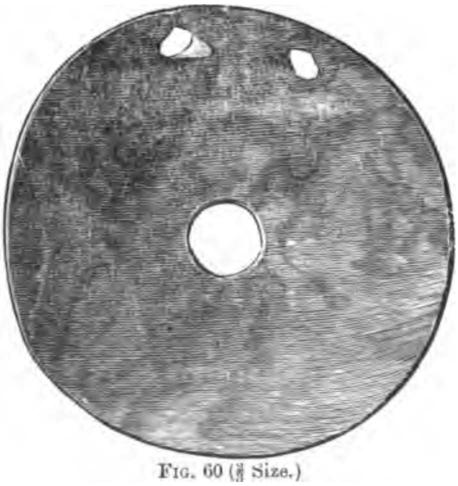


FIG. 60 (¾ Size.)

Nothing affords better evidence of the widely-extended wanderings of the Indians than we find in ornaments of shell made from species whose habitat is more than a thousand miles distant from where the manufactured articles are picked up. Valves of our own unios are often found in graves and ash-heaps, but scarcely any labor seems to have been spent upon them—they were probably regarded as too fragile for either use or adornment.

Large and strong conches from southern seas were highly prized, and some of the finest Indian scroll patterns have been wrought on broad pieces of these. No elaborately-worked specimens have as yet fallen to our lot, but we possess several plainly-made articles. Fig. 60 is part of a find made in 1849 by a Mr. John McDowell when excavating a cellar near Blackfriars bridge, London, Ontario. Many other fine specimens (all of which we procured from Mr. Matheson) were found in this grave. Those of shell included three whole "gorgets," one of which is represented in Fig. 60; two halves of others somewhat smaller; one large spoon-like piece made from what must have been nearly a third of the outside whorl; a small and neatly-finished heart-shaped ornament (all these were perforated) a large bead made from the columella; and eight pieces of wampum.

FLINTS.

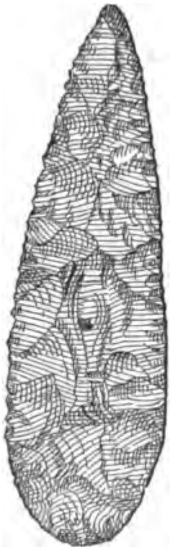


FIG. 61.

In Fig. 61, from Pike's Farm, Wolfe Island, we have an excellent illustration of the dexterity possessed by the Indians in the manipulation of flinty substances. Not only is this specimen as nearly as possible symmetrical, but it is surpassingly thin, for although eight and a half inches long, it barely averages one-fourth of an inch in thickness. The edges are sharpened by chipping mainly from one side.

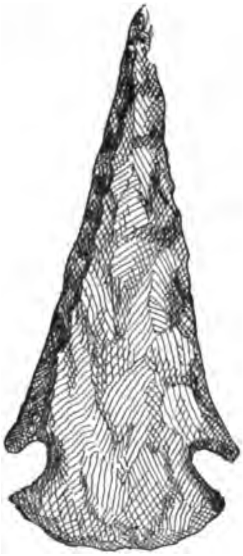


FIG. 62.

A unique specimen, in many respects, is shown at Fig. 62. Though less than three inches in length, it is almost as thick as Fig. 61. The sides are as nearly flat as it is in the nature of flint to be made, and the edges are chipped at such an angle as to make a cross section as nearly as possible a rhomboid. Flints so chipped have been regarded as "rotary" arrows, on the supposition that the intention of the angle was to make the weapon revolve in its flight,—a sort of aboriginal idea of "rifling," in fact, but that seems to be a little too far-fetched. It is more likely that the pecularity, when it occurs, is owing to the want of ambi-dexterity on the part of the maker, unless, as is probable, say in the case of Fig. 62, the flint was intended for a drill rather than a missile. The projections at the base can hardly be regarded as barbs, because the sides of the neck project so far that when this head was attached to a shaft or handle the hollows would be completely filled with the material employed to fasten it on. It was presented by Mr. E. T. Hummell, Decatur, Alabama.

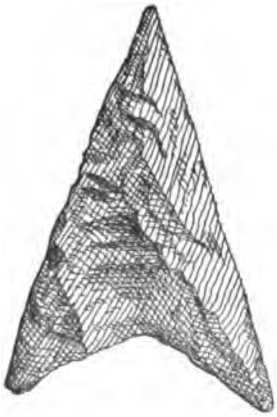


FIG. 63.

A somewhat unusual form of arrow-head is seen at Fig 63. The notched base combines the wedge method of insertion with the barbed form. This type of weapon is more common in the Central States than in Ontario.

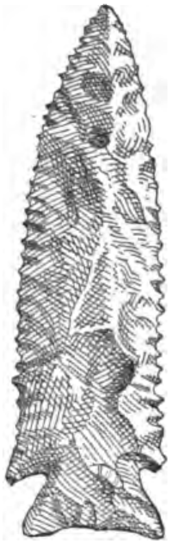


Fig. 64.

Fig. 64 is a fine example of the serrated edge. It is from near Lawrenceburg, Indiana, and was presented to us by Dr. Collins, of that city.

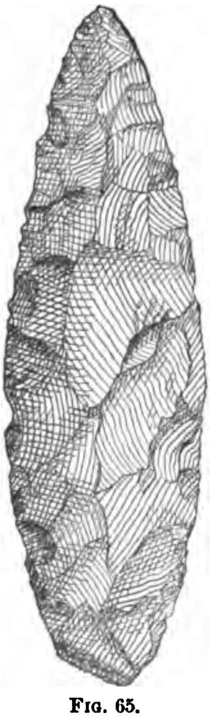


Fig. 65.

Fig. 65 represents the largest chipped implement in the museum. It measures eleven and a half inches in length. It is made of hard cherty limestone, and shows signs of having been in use for digging (?), as the ridges between the flakings are worn down slightly.

This magnificent specimen formed part of the handsome collection presented by Mr. James Dickson, P.L.S., of Fenelon Falls.

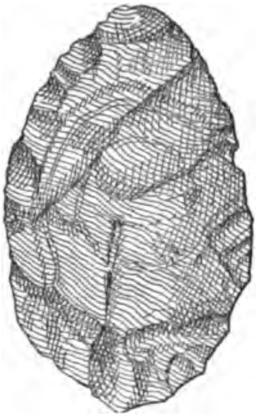


FIG. 67.

Fig. 67 is a large leaf-shaped and roughly dipped "flint," from Pike's farm, Wolfe Island. It is six inches and a quarter long, by four inches wide. If found in Europe it would be regarded as paleolithic, but as copper-beads and many highly finished stone weapons were found along with this specimen the inference is that all were produced contemporaneously. Another specimen from the same locality is made of similar material (both showing a nucleus) and is much better finished, besides being provided with a neck for attachment to a handle.

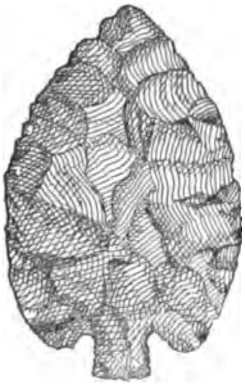


FIG. 68.

Fig. 68, scarcely inferior in size, is also from the same farm. The material, however, is of a finer quality, and the chipping has been more carefully done. It is about five inches and three quarters long and nearly four broad.

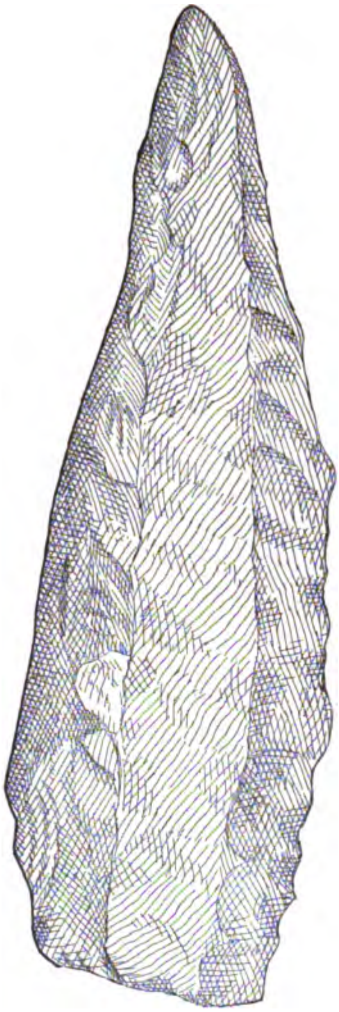


FIG 69.

Among the specimens presented by Mr. Ransom, of Hitchin, few are more instructive than the one figured at 69. It represents an enormous flint cone, ten inches long, from which large chips have been flaked for tool making. Fig. 69 is from Persigny, a locality that has yielded many valuable paleolithic relics.

CARVED HEAD.

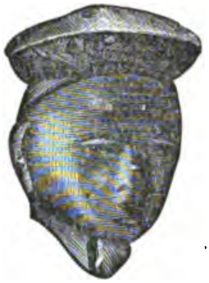


Fig. 70. (Full Size.)

Fig. 70 is as beautiful as it is remarkable. Almost black, and apparently carved from a piece of limestone, one is struck at first sight both with the design and the quality of the workmanship. The head-dress is quite unlike what we would suppose an Indian to model, and the conception of the head itself is different in every respect from the normal aboriginal attempts to represent human features. The half-finished appearance of the under side of the neck gives us the idea that the head might at one time have formed part of a whole figure. A hole is bored through piece from below the chin to the top of the cap, immediately above the forehead. This specimen is from lot 34, con. 7, Beverley, the farm of Mr. Jas. Dwyer.

TABLETS.

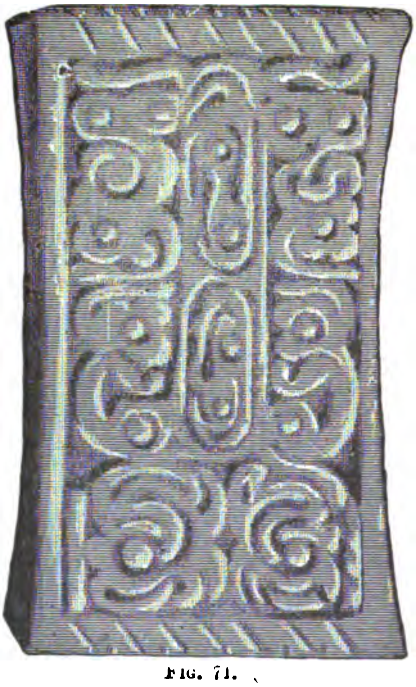


Fig. 71.

Fig. 71 represents the celebrated Gest or Cincinnati Tablet. It is five inches long, three broad at each end and half an inch thick. The material is a light brown sandstone of close texture. Quoting from Mr. Robert Clarke's pamphlet on the "Prehistoric Remains at Cincinnati," I find that Mr. E. G. Squier, a good archæological authority, described this relic in 1848 as follows: * * * "The figures are cut in low relief (the lines being not more than one-twentieth of an inch in depth) and occupy a rectangular space four inches and two-tenths by two and one-tenth wide. The sides of the stone, it will be observed, are slightly concave. Right lines are drawn across the face, near the ends; at right angles and exterior to these are notches, twenty-five at one end and twenty-four at the other. Extending diagonally inward are fifteen longer lines, eight at one end and seven at the other. The back of the stone has three deep, longtitudinal grooves, and several depressions, evidently caused by rubbing—probably produced by sharpening the instruments used in the sculpture. * * * * It will be observed that there are but three scrolls or figures—four of one description and two of each of the others. Probably no serious discussion of the question, whether or not these figures are hieroglyphical, is needed. They more resemble the stalk and flowers of a plant than anything else in nature. What significance, if any, may attach to the peculiar markings or graduations at the ends, it is not undertaken to say. The sum of the products of the longer and shorter lines (24x7 + 25x8) is 368, three more than the number of days in the year; from which circumstance the suggestion has been advanced that the tablet had an astronomical origin and constituted some sort of a calendar."

Mr. Squier then goes on to suggest that the tablet was probably only a stamp, such as have been found "in Mexico and in the mounds of the Mississippi" made "of burned clay, the faces of which are covered with figures, fanciful or imitative, all in low relief like the face of a stereotype plate. These were used in impressing ornaments upon the clothes or prepared skins of the people possessing them." Dr. (now Sir) Daniel Wilson in "Pre-historic Man," vol. 1, page 175, after criticising the astronomical and stamp theories, proceeds: "But whatever theory be adopted as to its original object or destination, the series of lines on its two ends have justly attracted attention, for they constitute no part of the device and can scarcely be regarded as an ornamental border. Possibly in them we have a record of certain scales of measurement in use by the mound builders; and if so, the discovery is calculated to add fresh interest to our study of the geometrical structures, which, far more than great mounds, are the true characteristics of that mysterious people."

A recent essayist in the "Journal of the Cincinnati Society of Natural History" for January, 1887, after demonstrating to his own satisfaction the phallic origin and interpretation of the design and the astronomical intention of the lines and spaces, concludes, "Thus we have the exact descriptions of these tablets [the Richardson and the Gest or Cincinnati.] The numbers shown on these are familiar as those used in the measures of the Mound Builder works in which the tablets were found; also as periods of lunar and solar time, and especially lunar time, as marking the natural periods of menstruation, quickening, viability and gestation. The relationship becomes closer when we find that the Gest Tablet, as to its size, has special measures from the same unit or standard with the Gridley stone. They are: Length 5 inches; least breadth, 2.50 inches; greatest breadth, 8 (2.99) inches, with two chords of 4.50 inches each."

Whatever may have been the purpose of this tablet, if, indeed, it had any beyond caprice or whim on the part of the maker, it is, at all events, a genuine relic. Fortunately the evidence in its favour is too strong to be put aside by even the most iconoclastic.

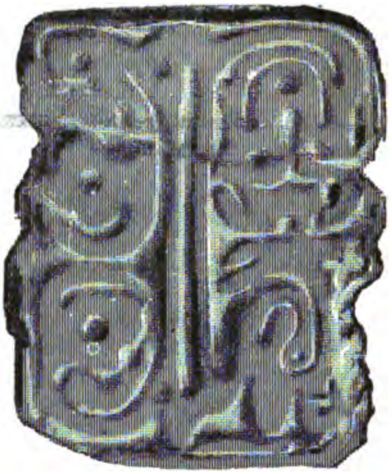


FIG. 72.

As if to "make assurance doubly sure," however, on this point, the Clarke or Waverly Tablet has been discovered in the collection of Dr. W. R. Hurst, of Piketon, Ohio, where it seems to have been regarded of so little value that its broken parts were not even placed together.

Its corroborative testimony in favour of the Cincinnati Tablet cannot be overestimated. Fig. 72, which is little more than half the full size, gives a fair idea of its appearance. That the spirit of the design corresponds with that of the other is manifest —there is only less of it. The piece of stone is barely half as thick as in the Cincinnati specimen, and is not so well preserved at the edges, probably on that account.

This tablet is now the property of Mr. Robert Clarke, publisher of Cincinnati, to whom we are indebted for casts of both these fine specimens.

COPPER.

Of all the material employed by the Indians in the production of ornaments and implements, native copper is among the rarest. It has been asserted in a recent publication that the presence of objects formed from this metal in its virgin condition over so large an area of North America in no wise argues communication on the part of the natives with the Lake Superior deposits. Enough copper, it is said, may be found as "drift," from which all the objects made by the Indians, might easily be made. While it may be acknowledged that drift copper is occasionally found, it must, at the same time, be affirmed that it is exceedingly rare. I have not heard of a single instance in Ontario, and the chances now-a-days are millions against one as compared with the opportunities afforded during the pre-historic period when forest-growth covered the country and when the ground was littered with dead and decaying vegetable matter. It is absurd to regard distance as any barrier when we find here sea-shells from the distant south. As well, too, might it be argued that pipes of catlinite discovered in Ontario, prove no connection with the famous pipe-stone quarries of the North-West. That copper was brought here from Lake Superior there can be little, if any, doubt.

In an article on "Ancient Society in Tennessee," by G. P. Thruston, in that excellent publication *The Magazine of American History*, the writer speaking of what is taken from the mounds of his State says, "Among the treasures found are a number of articles indicating commercial development, a pipe made of 'red pipestone,' or catlinite, found only in Dakota Territory, more than a thousand miles distant; native copper from the shores of Lake Superior, ornamented sea-shells from the Gulf and south Atlantic coasts, mica from North Carolina, exquisite polished implements of cannel coal, pearls from the southern rivers, implements of polished hematite from distant iron mines, and of steatite and quartz from the Alleghany range."

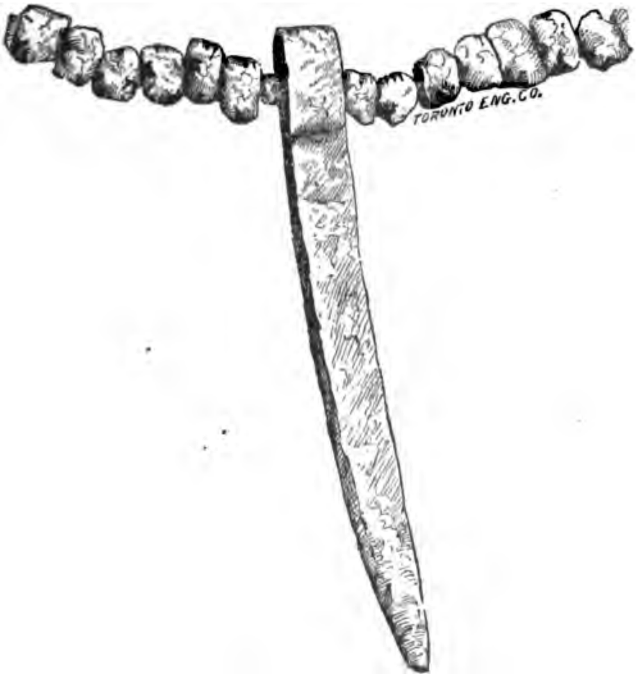

TORONTO ENG. CO.

FIG. 73. (Full Size.)

From the Pike farm on Wolfe Island, we have upwards of one hundred copper beads. As may be seen from Fig. 73, which illustrates fourteen of them, they vary considerably in size. They are in excellent preservation. Perhaps this is on account of their great thickness in proportion to the size of the holes. Along with these were three spike-like specimens, one of which is shown in the illustration. The eye is formed by the end being bent. In our show-case, the beads and the three long pieces are strung to form a necklace, the latter at nearly equal distances apart; but I have not been able to learn how far this arrangement corresponds with the way they were disposed when found. Altogether, these form a most valuable addition to our very modest collection of copper articles.

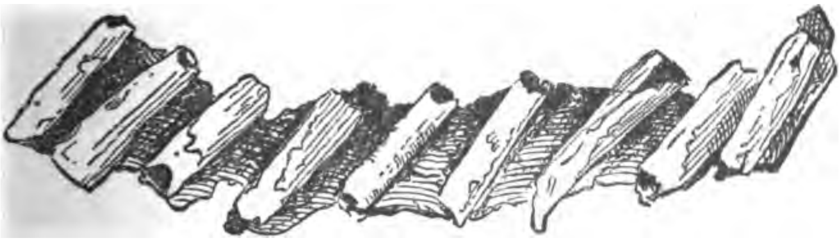


FIG. 74.

This cut represents nine cylindrical copper beads just as they were found in the Tremont Park mound, Tidd's Island. They were lying on a piece of the original hide or leather to which they had been attached, and I was careful not to disturb them. They are made of beaten or leaf copper rolled into their present shape. In length they measure from three-fourths of an inch to an inch, and vary from three-sixteenths to five-sixteenths of an inch in diameter. The fine thongs by which they were sewn to the hide are still adherent to the under side.

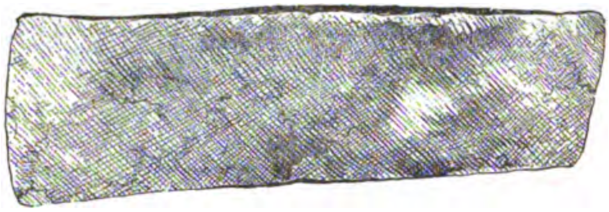


FIG. 75.

Fig. 75 was found by Mr. Samuel Haskett, on lot 23, con. 4, Biddulph township, and formed part of the Matheson collection.

It differs but little in pattern from some we had before, but it is, perhaps, specially interesting from the fact that a few specks of pure silver may be easily detected on the surface, thus affording proof (although none is required) that the material is native or virgin.

It is four and a half inches long, and one inch and a half wide at the cutting edge.

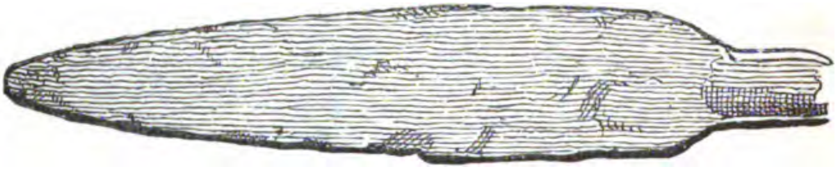


FIG. 76.

This good specimen (Fig. 76) was found by Mr. David Willet, in the township of Burford. It measures eight and three quarter inches long, and at its widest part is an inch and five-eighths. Like some of those described in our last report, it is provided with a fairly well-formed socket to receive a handle or shaft.

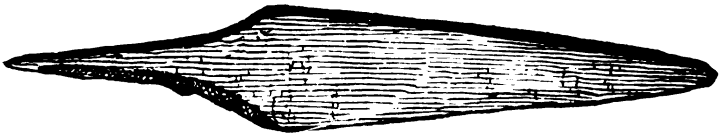


FIG. 77.

Fig. 77 is much smaller, and has a tine instead of a socket. It was ploughed up on lot 15, con. 7. in the township of London, by. Mr. James Hodgins. Both of these were procured from Mr. Matheson.

HEMATITE (Iron Ore).

The Indians of the territory (much of which formerly belonged to New France) now included in the Central States of the American Union, employed hematite to some extent in the production of weapons and a few other things.

I have never found, or heard of anything being found, of this material in Ontario, although it is more than probable that there are specimens of it in some private collections. The only trace of it I have met with was on Tidd's Island (see report for 1887, page 10), where some decomposed ore had apparently been deposited in a grave for the use of the "dear departed" as paint. In the Central States, however, fragments of hard and compact hematite have been patiently ground, often into handsome form, for celts (or for insertion into the heads of clubs), corresponding in size and shape with many weapons found in this country, made for a similar purpose from granite, syenite and other primitive rocks.

We have one from the collection of Mr. Warren K. Moorehead, of Xenia, Ohio. Recently, we have also procured four good ones from Dr. Rear, of this city. They were found in Linn Co., Missouri.

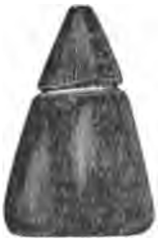


FIG. 78.

Fig. 78 is of the same material, beautifully formed. A cross section is circular. The slight groove, one-third of the length from the top, suggests the idea of suspension, and the specimen may have been a sinker. It was found near Columbus, Ohio, and was presented by Master C. D. Pettibone, of Cincinnati.

TYPES OF RECENT IRON AXES.

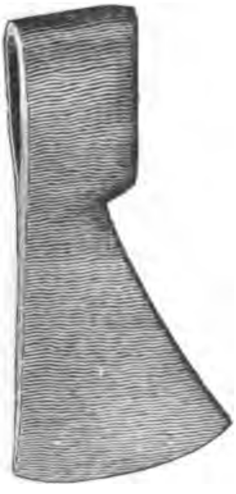


FIG. 79.

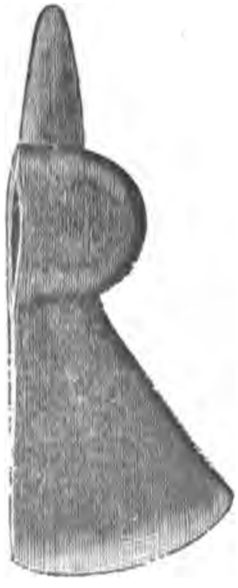


FIG. 80.

Immense numbers of cheap iron axes or tomahawks were imported to America for distribution among the natives "for value received" no doubt. Poor tools as these were, few of them having a steel edge, they were still greatly superior to the former implements of stone or even copper, and were accordingly highly prized by the Indians. Fig. 79 is the most common type. Sometimes the pattern varies slightly and the size often very much. In what I take to be the oldest forms the hole is round; in those that are more recent it is oval. The stamps of the makers occasionally enables us to distinguish their nationality, but more frequently this is not easy. The billed or poled form is not so common. Fig. 80 is the only one in our collection. It was procured from Dr. Rear, Toronto.

Another form was somewhat similar to Fig. 80, but instead of the pole a pipe-head was fashioned, a small hole communicating with the handle which formed the stem. Axes of this kind were more ornamental than useful.

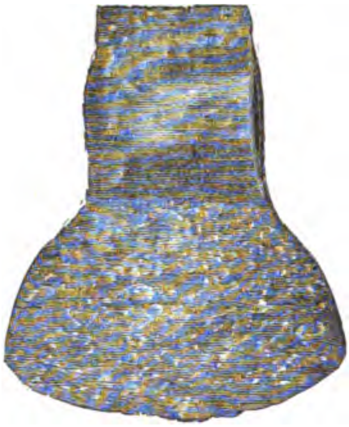


FIG. 81.

The type shown at Fig. 81 resembles the hatchet still used in Britain. Axes of this form are comparatively scarce in Ontario. All of the kind I have seen are steel edged, and therefore much more serviceable then those like Fig. 79. The cut illustrates one found by Mr. Albert Loughead of Nottawasaga.

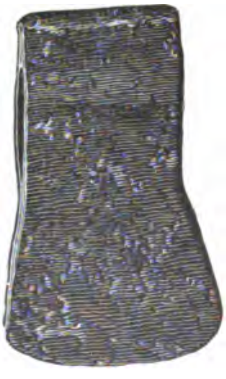


FIG. 82.

The most modern form of tomahawk is shown at Fig. 82. It approaches closely to the shape of tool so well known by every one to-day. Those however, that were served out to the Indians were made smaller than what we call a "chopping axe." the one figured being not more than half the average size of a woodman's implement. No doubt they were intended to be used single-handed.

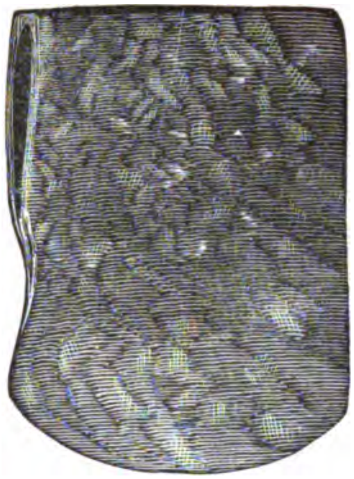


Fig. 83.

The specimen figured (Fig. 83) is large and coarse, and has the appearance of having been forged by some colonial country blacksmith, who, if he did not actually try "his 'prentice han'" on it, had certainly not made a great many before he produced this one.

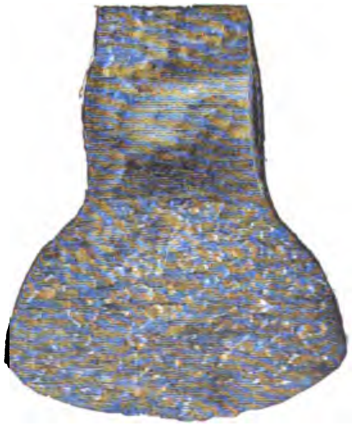


Fig. 84.

Indian hatchets were made by Canadian mechanics within the last fifty or sixty years. Two in our collection bear the stamp of the patriot "S. Lount." Fig. 83 was in the Matheson collection.

CONTRIBUTIONS TOWARDS A BIBLIOGRAPHY OF THE ARCHÆOLOGY OF THE DOMINION OF CANADA AND NEWFOUNDLAND.

[The accompanying list and digest have been prepared by Mr. A. F. Chamberlain, B.A., Toronto, and are the first on this subject that have ever been made covering the ground in question.

It requires only a glance to perceive the great labor involved in the preparation of such a statement as is here presented, and Mr. Chamberlain's sole reward must consist in the consciousness that he has performed a task which will, to a very considerable extent, facilitate reference by students, at the same time that it places on record the work that has been done in this field.

There are, doubtless, other papers and works bearing on the subject—for Mr. Chamberlain modestly speaks of his work as "Contributions,"—and he will be glad to hear from any one who may be able to assist him in making this bibliography as nearly complete as possible. Address, A. F. Chamberlain, B.A., Canadian Institute, Toronto.]

Bailey, L. W., M.A.—Indian relics from New Brunswick. Science, Vol. I. (1883), pp. 245-246.

Describes some specimens of pottery.

Bailey, L. W., M.A.—On the relics of the stone age in New Brunswick. Bullet. of the Nat. Hist. Soc. of New Brunswick, No. 6 (1887), pp. 3-16.

A somewhat exhaustive paper with three plates. Nature, distribution and mode of occurrence, pp. 4-7; implements of stone, 7-13; of shell and bone, 13; of clay, earthenware, 14-16.

+ Bain, James, Jr.—The present condition of the old French Fort at Ste. Marie. Proc. Canad. Inst., 3rd Series, Vol. 3, 1886, pp. 278-279.

Brief abstract of paper given.

Baird, Spencer F.—Aboriginal Shell mounds of New Brunswick and New England. Proc. U.S. National Museum for 1881, Vol. 4 (1882), pp. 292-297.

New Brunswick shell deposits treated on pages 292, 293, 294, 295.

Bell, Charles N.—The Mound-builders in Canada. Proc. Canad. Inst., 3rd Series, Vol. 4 (1886), pp. 131-138.

Describes the nature, situation and contents of mounds in the Province of Manitoba. A summary and review of this paper is to be found in the Verhandl. der Berl. Gesellsch, fr. Anthrop., Ethnol., und Urgeschichte, Jahrgang, 1886, s. 192.

Bell, Charles N.—Aboriginal trade in the Canadian North-West. Canad. Record of Science, Vol. 2 (1886), pp. 102-105.

Evidences of trade from contents of mounds.

Boyle, David.—The Archæological Outlook. Proc. Canad. Inst., 3rd Series, Vol. 4 (1886), pp. 1-7.

At pp. 4-5 describes a find of 70 tomahawks in the Township of Beverley; at p. 5 an ossuary in the same district.

Boyle, David.—Report of Curator for 1885-1886. Proc. Canad. Inst., 3rd Series, Vol. 4 (1886-7), pp. 208-210.

Enumerates specimens.

Boyle, David.—Archæological Report. Annual report of the Canadian Institute, Session 1886-1887, being part of appendix to the report of the Minister of Education, Ontario, 1887, Toronto, 1888, pp. 9-58.

The most important contribution to the Archæology of Ontario. Describes, with 117 figures, part of the collection now in the Institute's Museum. Pottery, pp. 18-21; clay pipes, 22-24; stone pipes, 25-30; breast-plates and gorgets, pendants, 30-33; ceremonial weapons, 33-36; totems, tribe-symbols, 36-38; slate spear-heads, 38; grooved axes, 39; gouges, 40; tubes, 41; beads, 42-43; flints, 44-47; grinding and rubbing stones, 48; objects in shell, 49-50; bone and horn, 50-54; copper, 54-56; village sites and ossuaries, 57-58.

Pages 9-14 describe Mr. Boyle's operations during 1887.

Busk, Geo., F.R.S.—Description of two Beothuc skulls. Journ. of Anthrop. Inst. of Gt. Brit. and Ireld., Vol. 5 (1885), pp. 230-233, with plate.

Croft, Henry, LL.D.—Report on implements found near Brockville. Canadian Journal, new Series, Vol. 1 (1856), pp. 334-336. See Reynolds, Thos.
Chemical analysis of copper implements.

Dade, Rev. C.—Indian Remains. Canad. Journal, Vol. 1 (1852-1853), p. 6.
Describes an Indian burying ground in Beverley Township, some 10 miles from Dundas.

Dawson, Sir J. W.—Fossil Men and their Modern Representatives. An attempt to illustrate the character and condition of prehistoric man in Europe by those of the American races. Montreal, 1880. 1 Vol. VIII., 348 pp., illustrd., 12 mo. Passim.

Fairbank, Dr. F. R.—On some flint arrowheads from Canada: Journ. Anthrop. Soc. Lond., Vol. 2 (1864), pp. lxiv-lxv. Bound up with Anthrop. Rev., Vol. 4 (1864).
Deals with some arrowheads ploughed up on the shore of Lake Erie.

Fowler, Rev. Jas.—On Shell heaps of New Brunswick. Report of Smithson. Inst., 1870, (Washington, 1871), p. 389.
Negative evidence as to existence of shell mounds in Northumberland County, New Brunswick.

Gibb, Sir Duncan, Bart., M.A., M.D., LL.D., F.R.S.—Stone implements and fragments of pottery from Canada. Journ. Anthrop. Inst. of Gt. Brit. and Ireld., Vol. 3 (1874), pp. 65-69, and 2 plates.
Describes arrowheads from Quebec, Island of Montreal, Saguenay District, Ottawa River, and Chippewa (Ont.); pottery from Lake Erie, Montreal Island and Brant County; hatchets from Niagara; spear-head from the Saguenay.

Guest, E. W.—Ancient Indian Remains near Prescott, C. W. Ann. Report Smithson. Inst., 1856, pp. 271-276, with eleven figures.
Describes mounds in Augusta Township, eight and one-half miles north-west of Prescott, Ontario, and similar structures near Spencerville.

Gunn, Donald.—Indian Remains near Red River Settlement, Hudson's Bay Territory. Report of Smithson. Inst., 1867, (Washington, 1872), pp. 399-400.
Describes tumulus and contents.

Haliburton, R. S.—A search in B. N. A. for lost colonies of Northmen and Portuguese. Proc. Roy. Geog. Soc. Lond., new Series, Vol. 7 (1885), pp. 25-34.
Notices (p. 34), earth mounds, etc., near St. Peter's, Cape Breton, which Indians ascribe to white men before the arrival of the French.

Kane, Paul.—Chinook Indians. Canadian Journal, Vol. III., 1854-1855, pp. 273-279.
P. 277, sepulchral rites; p. 274, shell-money, utensils.

King, Richard, M.D.—On the industrial arts of the Esquimaux. Jour. of Ethnol. Soc. London, Vol. I., 1848, pp. 277-300.

Lawson, A. C.—Ancient rock inscriptions on the Lake of the Woods. American Naturalist, Vol. XIX., 1885, pp. 654-658. Illus.
The above paper has been re-printed in pamphlet form.

L'Heureux, Jean.—The Kekip-Sesoators, or Ancient Sacrificial Stones of the N. W. Tribes of Canada. Journal of the Anthrop. Inst. of Great Brit. and Ireld., Vol. XV., 1885, pp. 161-165.
Describes the ancient and interesting sacrificial stones of the Blackfoot Indians.

Lloyd, F. G. B., C.E., F.G.S.—Note on some Indian Remains found on the Coast of Labrador. Jour. Anthrop. Instit. of Great Brit. and Ireld., Vol. V., 1875, pp. 39-44.

Lloyd, F. G. B., C.E., F.G.S.—On the stone Implements of Newfoundland. Jour. Anthrop. Instit. of Great Brit. and Ireld., Vol. V., 1875, pp. 233-238, with three plates.

Lloyd, F. G. B., C.E., F.G.S.—On the Beothucs, a tribe of red Indians, supposed to be extinct, which formerly inhabited Newfoundland. Jour. Anthrop. Instit. of Great Britain and Ireld., Vol. V., 1875, pp. 21-39, with plate.

Mason, O. T.—Basket-work of the North American Indians. Smithsonian Report, 1884, Pt. II., pp. 291-306, with 64 plates.

Describes the basket-work of some Canadian Indians. Tinneh, pp. 294-295; Chilkaht, 295; Haida, 296-297; Bilhoola, 297; Makahs, Algonkins, 305.

Mason, O. T.—Throwing-sticks in the National Museum. Smithsonian Report, 1884, Washington, 1885, pp. 281-289, with 16 plates.

Describes the types of throwing-sticks in use by Canadian Eskimo at Ungava, 281-282; Cumberland Gulf, 283; Fury and Hecla Straits, 283; Anderson's River, 283.

(?) **Matthew, Mayhew** [?—], G. T.—A supposed Specimen of aboriginal Art. Smithsonian Report, 1881, pp. 672-673.

Describes a boulder-like stone, at one end resembling a human head, found at Gondola Point, King's Co., New Brunswick.

Mayhew, G. F., M.A., F.R.S.—Discoveries at a Village of the Stone Age at Bocabec. Bulletin of Nat. Hist. Soc. of New Brunswick, No. III., 1884, pp. 6-29, with map.

An exhaustive and valuable paper. Describes a village site at Bocabec, New Brunswick, and the relics found. Huts, 11-15; pottery, 15-18; implements and weapons of stone, 18-22; bone and ivory, 23; animals used as food, 24-29; antiquity of village and ethnic relations of the people, 29.

McKellar, Sheriff.—A Bragh or stone flour mill. Proc. Canad. Institute, 3rd Series, Vol. V., 1888, p. 193. Title.

Described a stone mill in use by the early settlers of Western Ontario and now in the Institute's Museum.

MacLachlan, R. W.—Indian stone Pipes. The Canadian Antiquarian and Numismatic Journal, Montreal, Vol. IV., 1875-1876, pp. 15-22, with plate.

Describes pipes of Flathead Indians, 20; pipe found at Balsam Lake, Peterboro' Co., 20; pipe from Hochelaga, 21.

MacLachlan, R. W.—Fragments from the Stone Age of Montreal. The Canadian Antiquarian and Numismatic Journal, Vol. IV., 1875-1876, pp. 174-181, with plate.

Spear and arrow heads, 176-177; whetstone, 178; stone hammer, 178; axe, 179; stone celt, 179; knife, 180.

McLean, Rev. John.—The Mortuary Customs of the Blackfeet Indians. Proc. Canad. Institute, 3rd Series, Vol. V., 1888, pp. 20-24.

Describes burial rites among the Blackfeet of the Canadian North-West.

Murdoch, John.—A study of the Eskimo bows in the U. S. National Museum. Smithsonian Report, 1884, Pt. II., pp. 307-316, with 11 plates and map showing distribution.

Naturaliste Canadien, Le.—Age de la pierre taillie chez nos Aborigenes. Tome XVI., 1886-1887, pp. 65-72.

Discusses the stone age in Canada.

Patterson, Rev. Geo., D.D.—Antiquities of Nova Scotia. Smithsonian Report, 1881, pp. 673-677.

A summary of our knowledge of the Archæology of this Province. Treats of earthworks, 673-674; shell heaps, 674; engraved stones, 675; mummy, 675; flint factories, 675; implements, 676-677.

Payne, F. F.—List of Eskimo implements, dresses and other objects of interest from Prince of Wales' Sound, presented by Mr. F. F. Payne to the Museum of the Canadian Institute. Proceed. Canad. Inst., 3rd Series, Vol. V., 1887, pp. 12-13.

Reynolds, Thomas, M.D.—Discovery of copper and other Indian relics near Brockville. Canadian Journal, new Series, 1856, pp. 328-334, with 4 figures in text.

Describes discoveries of chisels, knives, together with a portion of a pipe, a clay mask, etc., at Les Galops Rapids, while digging the St. Lawrence Canal, in 1847.

Sandham, Alf.—Ville. Marie. A sketch of Montreal, past and present. Montreal, 1870, X., pp. 393.

Describes, pp. 384-388, Indian relics from Montreal and vicinity.

Schwatka, Lieut. F., U.S.N.—The Igloo of the Innuit. Science, Vol. 2, 1883, pp. 21 -216, 259-262, 304-306, 347-8.

Describes Igloos and implements used in their construction by, amongst others, the Eskimo on King William's Land, Chesterfield Inlet, Back's River and Hudson's Bay in Canada.

Smith, A. C., Letters of—Edited.—On prehistoric remains and on an interment of the early French period at Tabusintac. Bullet. Nat. Hist. Soc. of New Brunswick, No. V., 1886, pp. 14-20.

Describes Archæological discoveries at Tabusintac River, New Brunswick, with chart of vicinity.

Swan. J. G.—The Haidah Indians of Queen Charlotte's Islands, B. C., with a brief description of their carvings, tattoo designs, etc. 4to., Washington, 1874, pp. 22, with 7 plates. See Smithsonian collections, Vol. XXI.

Swan, J. G.—Smithsonian Report, 1880, Washington, 1881, p. 447.

Describes a carved seal club or tinethl of the Makah Indians made on the Coast of Vancouver's Island.

Van Courtland, Edward.—Notice of an Indian burying ground. Canadian Journal, Vol. I., 1852-1853, pp. 160-161.

Describes an Indian burying ground and contents discovered at Bytown, (Ottawa) in 1843.

Wallbridge, Thomas Campbell.—On some ancient mounds upon the shores of the Bay of Quinte. Canadian Journal, new Series, Vol. V., 1860, pp. 409-417, with two plates between pages 482-483.

Describes mounds and contents in the neighborhood of Rednersville and Massassaga Point.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Hints for the formation of a Canadian collection of ancient crania. Canadian Journal, Vol. 3, 1854-1855, pp. 345-346. Signed "D. W."

Wilson, Sir Daniel, LL.D., F.R.S.E.—Observations suggested by specimens of a class of conchological relics of the red Indian tribes of Canada west. Canadian Journal, Vol. 3, 1854-1855, pp. 155-159.

Describes specimens of tropical shells found with Indian remains; also describes an ossuary in Beverley Township.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Discovery of Indian remains in the County of Norfolk. Canadian Journal, new Series, Vol. 1, 1856, pp. 511-519.

Describes discovery of a skeleton, fragments of pottery, etc., in the Township of Windham.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Indian remains. Canadian Journal, new Series, Vol. 1, 1856, pp. 554-556.

Describes an Indian barrow near Orillia, Simcoe County, from which 70 skulls, some beads, copper kettles, etc., were taken. Signed "D. W."

Wilson, Sir Daniel, LL.D., F.R.S.E.—Physical ethnology. Smithsonian Report, 1862, Wash., 1863, pp. 240-302.

Treats of crania of Canadian Indians, 256; table of measurement of Huron crania, 259; of Algonkin crania, 260.

Wilson, Sir Daniel, LL.D., F.R.S.E.—The Huron race and its head form. Journal of the Anthrop. Instit. of Great Brit. and Ireld., Vol. 1, 1872, pp. 262-263.

A paper read before the Canadian Institute, April 8, 1874.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Some stone implements from Lake St. John. Proc. Canad. Inst., 3rd Series, Vol. V., 1887-1888, p. 124. Brief abstract.

ADDENDA.

Belcher, Capt. Sir Edw., R.N.—On the manufacture of works of art by the Esquimaux. Trans. Ethnol. Soc. Lond., new Series, Vol. I. (1861), pp. 129-145.

Blake, Lady [Edith].—The Beothuks of Newfoundland. Nineteenth Century, Vol. XXIV., No. cxlii (Dec., 1888), pp. 899-918.

General description. Wigwams, 912; canoes, 912; ornaments, 913.

Bryce, Rev. Geo., LL.D.—The mound-builders [a lost race described]. Season 1884-1885, Trans., 18, (Hist. Soc.) Winnipeg, pp. 1-20.

A most important contribution to our Archæological knowledge of the Manitoba region. Plates p. 8 (5 figures), p. 12, p. 18.

Description of mound, 2; varieties of mounds, 3-4; great mound on Rainy River, 4-13; excavation, 5-6; natural products, 6-7; manufactured articles, 9-13; stone implements, 9-10; horn, 10; copper, 10-11; pottery, 11-12; shell, 11; the mound-builders, 14-15; not an Indian race, 13-14; mound on Rainy River, 15-16; age of mounds, 16-19.

Bryce, Rev. Geo., LL.D—The Souris Country, its Monuments, Mounds, Forts and Rivers. (A paper read before the Society 10th Nov. 1885.)

Hist. and Scientific Society of Manitoba, Winnipeg; Trans., 24, season 1886-7. Winnipeg, 1887, pp. 1-7.

Pp. 1-3, red pipestone quarry; 3, remarkable earth works and embankments on South Antler Creek; 4-5, mound on South Antler and on North Antler Creek; 5-7, exhaustive list of contents of mound, age of mound, built by Mandans. (?)

Canadian Antiquarian and Numismatic Journal, The—Published quarterly by the Numismatic and Antiquarian Society of Montreal. Vol. III. (1874-5), pp. 110-112.

Interpretation of Indian wampum belts.

Interpretation of 3 belts of wampum sent to Canada by the Mohawks in 1639. (See Lit. and Hist. Soc. of Quebec.

Canadian Antiquarian and Numismatic Journal, The. Vol. III., pp. 167-169.

Indian dress, love-making, feasts, burials, from MS. Letter of Soeur Ste. Helene, published by Abbé Verran. (See Revue Canadienne, Feb., 1875, pp. 108-9.)

Canadian Antiquarian and Numismatic Journal, The—Vol. VI. (1877-1878), pp. 166-167. Stone Medallion from St. George, New Brunswick.

Gibb, Sir Duncan, Bart., M.A., M.D., LL.D., F.G.S.—Canadian stone implements and fragments of Pottery, pp. 181-185. Canad. Antiq. and Numism. Journal, Vol. III. (1874-5).

Describes (182-3) 2 spear-heads from Saguenay district, 2 hatchets from Niagara Falls, 1 from Chippewa, 4 from Niagara, 1 from Ft. Wm. Henry, and 1 from Quebec. 183-4—3 fragments of pottery—one from north shore of Lake Erie, and two from the Island of Montreal.

Gibbs, Geo.—Notes on the Tinneh or Chepewyan Indians of British and Russian America. Smithson. Report for 1866, (Wash., 1872), pp. 303-327; pp. 321-325, dwellings, arts, instruments, implements.

Greene, W.—On some processes in use among the Hurons (of Lorette) in dyeing. Trans., Lit. and Hist. Soc. of Quebec, Vol. II., (1831), pp. 23-25.

Greene, W.—Notes respecting textile substances in use among the N. American Indians. *Ib.*, pp. 310-312.

Hoffmann, W. J.—Comparisons of Eskimo Pictographs, with those of other American Aborigines. Trans. Anthrop. Soc., Washington, Vol. II. (1883), pp. 120-146, with 12 figures.

Kohlmeister, Benj., and Kmoch, Geo.—Journal of a voyage from Okkak on the coast of Labrador to Ungava Bay, etc. London, 1814. Describes (pp. 37-83) Eskimo ruins on Amitok Island ascribed to the ancestors of the Greenlanders; also, p. 44, Eskimo graves at Oppernavik.

Rink, Dr. H—The migrations of the Eskimo, as indicated by their progress in completing the Kayak implements. Journal of Anthrop. Inst. of Great Britain and Ireland, Vol. XVII., pp. 68-72.

Stupart, M. R. F.—The Eskimo of Stupart Bay. Proc. Canad. Instit., 3rd series, Vol. IV. (1886-7), pp. 95-114. Describes, p. 100, tents; 101-2, kyak; 102-3, igloos, implements and ornaments, 103.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Prehistoric Man. Researches into the origin of civilization in the Old and New World. London (1862), 1 vol; second edition (1876), 2 vols. Passim.

Wilson, Sir Daniel, LL D., F.R.S.E.—The Huron Race and its Head-form. Canadian Journal, sec. series, Vol. XIII. (1871-73), pp. 113-134. Plates, pp. 113, 126, 128; table of measurements, p. 131.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Ethnical Forms and Undescribed Artificial Distortion of the Human Cranium. Canadian Journal, second series, Vol. VII. (1862), pp. 399-446. Plates, 399 (Barrie skull), 406, 438; Huron skull from Barrie, 400, 401.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Some Ethnological Aspects of Conchology. Canadian Journal, second series, Vol. III. (1858), pp. 377-409. Shell ornaments of Chinook Indians, p. 380; find (in 1848) of shells and pottery, p. 399; Indian cemetery near Orillia, pp. 399-400.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Narcotic Usages and Superstitions of the Old and New World. Canadian Journal, second series, Vol. II. (1857), pp. 233-264, continued, pp. 324-344. Plate of Babeen and Chippeway pipes, p. 254; Mohawk pipe, p. 326; Chinook, p. 331; Cree, p. 333; pipe of Chippeways of Manitoulin Island, p. 333; plate of Babeen pipe, p. 334.

Wilson, Sir Daniel, LL.D., F.R.S.E.—Supposed prevalence of one Cranial Type throughout the American Aborigines. Canadian Journal, second series, Vol. II. (1857), pp. 406-435. Measurements of Chippeway skulls (Lake Couchiching), p. 422; general type of Canadian Indian skulls, p. 424-425; Western Canada Hurons, p. 428; Six Nations, p. 429.

Oct 19-1903

ANNUAL REPORT

OF THE

CANADIAN INSTITUTE,

SESSION, 1888-9.

BEING PART OF APPENDIX

TO THE

REPORT OF THE MINISTER OF EDUCATION, ONTARIO,

1889.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
PRINTED BY WARWICK & SONS, 68 AND 70 FRONT ST. WEST,
1889.

CONTENTS.

PAGE.
Annual Report of the Council of the Canadian Institute—Session 1888-89 ...... v.
  Appendix I. Membership .... viii.
  " II. Treasurer's Statement .... viii.
  " III. Classification of Papers .... xi.
  " IV. Librarians Report .... xi.

Reports of Sections—

  Biological Section .... xii.
  Philological Section .... xiv.
  Geological and Mining Section .... xiv.
  Architectural Section .... xvi.
  Sociological Committee .... xvi.
Archæological Report by David Boyle 1
  Names of Contributors 1
  Dr. F. Parkman's Letter 2
  American Visitors' Opinions 3
  *The Land of Souls 4
  Township of Nottawasaga (Tobacco Nation) 4
    Population 5
    Ossuaries 5
    Burial Customs 6
    Situation of Village Sites and Ossuaries 9
    Anderson Earthwork 11
  Fort-building 12
  Aboriginal Clearings 13
  Agriculture among the Tionnontates 13
  Food of the Aborigines 13
  Birch-bark Canoes 14
  Clay and Stone Pipes 14
  Extinction of the Hurons 14
  Village Site at Clearville, Orford Township 15
  Clearville "Fort" 15
  Plan of "Fort" 16
  Result of Examination at Clearville 17
  Triple occuple occupation of the ground 17
  Township of Humberstone 18
    Find made by "Solid Comfort Club" 18
    Specimens from Township ....

ARCHÆOLOGICAL REPORT—*Continued.* PAGE.

Township of York ... 19
  Village Site ... 19
  Pottery ... 19
Township of Vaughan ... 20
  Ossuary and Large Find of Skulls ... 20

NOTES ... 21
  Pottery ... 21
  Mindemoya Vase ... 22
  Clay Pipes ... 23
  Stone Pipes ... 28
  Bone and Horn ... 31
  Flint ... 35
  Stone Tubes ... 35
  Miscellaneous Stone Relics ... 36
  Mills or Mortars ... 38
  Copper ... 39
  Crania ... 41
  Modern Indian Dress, etc ... 42

FRENCH RELICS FROM VILLAGE SITES OF THE HURONS, BY A. F. HUNTER, B.A. ... 42
  Table Showing Geographical Distribution of French Relics in the Counties of Simcoe, York and Ontario ... 44

CATALOGUE OF SPECIMENS IN THE PROVINCIAL ARCHÆOLOGICAL MUSEUM ... 47
  Case A., European Manufacture ... 48
  " B., Broken and Unfinished Articles ... 50
  " C., Rough Flints ... 53
  " D., Typical Flints ... 53
  " E., Miscellaneous Flints ... 54
  " F., Flaked Tools and Weapons ... 54
  " G., Bone and Horn ... 56
  " H., " " " ... 60
  " J., Shell ... 62
  " K., Gouges ... 64
  " L., Stone Pipes ... 66
  " M., Slate Objects ... 68
    Bird Amulets ... 68
    Winged and Horned Specimens ... 71
    Tubes ... 73
    Bar Amulets ... 74
  " N., Gorgets—two or more holes ... 74
  " O., " —one hole ... 76
  " P., Copper and Hematite ... 78
  " Q., Of Unknown Use ... 80
  " R., Clay Pipes ... 83
  " S., Clay Pipes ... 85
  " T., Discs ... 87
    Rubbing Stones and Pestles ... 89

CATALOGUE OF SPECIMENS, ETC—*Continued.* PAGE.
Case U., Grooved Axes and Hammers 89
" V., Pottery 91
" W., Clearville Specimens 92
" X., Drills 92
" Y., Slate Weapons 94
" Z., Miscellaneous 95
" A2., Miscellaneous 97
Wall Case 1, Pottery 98
" 2, Iron Tomahawks, etc 98
" 3, Crania 99
" 4, Crania 99
" 5, Celts 99
" 6, Arrow and Spear Heads 100
Mortars or Mills 100
Modern Specimens 100
Blood Indian, N. W. Terr 100
Arouay Indian, British Guiana 100
" 7, Eskimo 101
Carib (West Indian) 101

BIBLIOGRAPHY OF THE ART AND ARCHÆOLOGY OF THE ABORIGINAL TRIBES OF THE DOMINION OF CANADA AND NEWFOUNDLAND.—SECOND PAPER by A. F. Chamberlan M. A. 102

ANNUAL REPORT OF THE COUNCIL OF THE CANADIAN INSTITUTE.
SESSION 1888-89.

The Council of the Canadian Institute has the honor to lay before its members its Fortieth Annual Report.

The Council has much pleasure and gratification in recording an increased interest in the work, and an extension in the influence and prestige of the Institute.

The movement for a universal system of time-reckoning, initiated by Mr. Sandford Fleming, has spread far and wide. A deputation waited on His Excellency Lord Lansdowne in May of last year with regard to this subject, who was kind enough to bring the pamphlet on "Time-Reckoning" before the notice of the Secretary of State, through whom it was sent to all the colonial and foreign governments.

Cosmic or twenty-four hour time is being largely adopted on this continent. Inquiries have lately been received from the government of Hong Kong on this subject. The very enterprising kingdom of Japan has adopted the system as the basis of its time reckoning.

A clock marking cosmic time, the present of an American firm, has been in the reading room of the Institute for over twelve months.

The government of our Province paid the institute the compliment of placing one of its members, Mr. W. Hamilton Merritt, on the Royal Commission to enquire into the Mineral and Mining Resources of the Province. The report is of great value and will largely extend the development of our mineral resources.

The interest in the work of the Institute has not flagged during the past year; there have been 24 ordinary meetings at which 31 papers were read, and 36 meetings of sections at which 39 papers were read, or a total of 70 papers for the session.

The range and character of these communications have been fully equal to the standard of former years; they have been well and fully discussed. The average attendance of the meetings is in advance of last year. The attendance of members in the reading room has also increased.

The Council desires to record its high appreciation of the generosity of the Government in again placing the sum of $1,000 at the disposal of the Institute for the extension of archæological research. Through the indefatigable exertions of the curator many valuable additions have been made to the museum from the Province and from the United States. The admirable arrangement of the specimens in the various cases, has greatly assisted the study of this important branch of our national history. It is gratifying to report that the museum has been visited by a large number of ladies and gentlemen, from many of whom valuable donations have been received.

The appointment of Mr. David Boyle, as representative of the Provincial Government at the Cincinnati Exhibition last year, has been productive of much good to the interests he represented there, and has been the means of many valuable gifts being presented to our museum. His archæological report for 1888 has already appeared as an appendix to the report of the Minister of Education for last year.

The thanks of the Institute are due to Mr. Sandford Fleming for his exertions in procuring an interesting and valuable present from the Grand Trunk Railway Company of a portion of the first sod of the Northern Railway, cut on the 15th October, 1851, by Her Excellency the Countess of Elgin and Kincardine, and the bottle used on 14th January, 1853, to christen Collingwood harbor, and an extract from the *Globe* of the 26th January, 1863, giving an account of these relics and other interesting matters.

The members of the Photographic Section, desiring to extend their work in a more practical manner, resolved to form a Photographic Society having wider scope than they believed would be offered by a union with the Institute; they have in consequence withdrawn from the Institute. The Council regrets this action.

The Biological and Natural History Section continues to make its influence felt, and deserves the thanks, not only of the Institute but of the citizens at large, for its recent successful remonstrances against the destruction of the purely natural beauties of High Park.

The list of donations and exchanges has increased. The library has received many valuable additions ; this department is carefully attended to by our energetic librarian ; over 300 volumes were bound this year ; extra accommodation in the library is an urgent necessity.

The treasurer's statement shows a satisfactory balance at the credit of the Institute, and the increased interest taken in the Institute by the comparatively small number of members in arrears.

The membership has been increased by 22 elections during the past session. The Council after much careful thought determined to make a thorough examination of the list of members and enforce the rules against members in arrears who refused to make any settlement. The list now submitted is more complete than any hitherto presented to the Institute, and represents truly the actual membership. The Council would urge on the Institute the importance of adhering to the step now taken, and enforcing the rules against members in arrears, as it is only by this means that membership in the Institute will become of value.

The Council endorses the remarks of the auditors that a proper valuation of the assets of the institute should be made.

During the past year the Institute has lost by death two distinguished life members, the Rev. Walter Stennett, of Cobourg, and Prof. G. Paxton Young. Apart from his special attainments in the department of Mental and Moral Philosophy, Prof. Young was a mathematician of a very high order; some of his later papers read before and published in the Proceedings of the Institute, place him in the foremost rank of mathematicians.

In recognition of his valuable services at the inception and in the early days of the Institute, as well as his honorable professional career, Mr. Kivas Tully, C.E, (who was our first Secretary) has been elected an honorary member.

Your Council is much gratified to announce that the invitation of the Institute to the American Association for the Advancement of Science to hold its next meeting in this city has been accepted, and there are bright prospects of a very successful meeting.

Following up the memorial of January, 1888, meetings have been held with the Honorable Commissioner of Crown Lands with reference to setting aside a tract of land for the preservation of the forests and wild animals in this Province. At his suggestion a memorial with a sketch map showing an area which could be made available for such purposes is being prepared.

The reports of the various Sections are appended. They all show satisfactory progress in their several branches.

All of which is respectfully submitted.

CHARLES CARPMAEL,
President.

APPENDIX I.

MEMBERSHIP.

Number of Members on 1st April, 1888,—309.

Honorary Members	7	
Life Members	10	
	——	17
Ordinary Members:		
1. Who have paid their subscriptions to 31st December, 1889, including new members	141	
2. Who have paid their subscriptions to 31st December, 1888	65	
3 " " 31st December, 1887	14	
4. Who are two years and more in arrears	3	
	——	223
		240
5. Losses through death and withdrawals	36	
6. Names struck off the roll for non-payment of arrears	23	
7. Names placed on suspense list for non-payment of arrears	10	
	——	69
		309
8. Members elected during the present session who have paid their annual subscription	15	
9. Members elected during the present session who have not yet paid	7	
	——	22
Associates	32	

APPENDIX II.

TREASURER IN ACCOUNT WITH INSTITUTE FOR THE YEAR ENDING MARCH 31st, 1889.

To Summary :—

	$	cts.
" Amount received, from building fund	$ 110	11
" " " in Imperial Bank	163	56
" Cash on hand	9	20
" Annual subscriptions	809	75
" Rents	233	50

To Summary :—

" Government Grant	$1,000 00
" Journals sold	15 65
" Periodicals sold	9 49
" Biological Section	50 00
" Woodcuts	4 75
" For Conversazione of 1886	2 00
" Interest	60
	$2,408 61

By Summary:

" Salaries	$ 370 50
" Printing Journal	688 67
" " Miscellaneous	39 25
" Stationery	45 53
" Postage	129 26
" Freight and express charges	23 27
" Repairs	56 96
" Gas	32 88
" Water	24 00
" Periodicals	123 21
" Furniture	6 00
" House cleaning	99 30
" Fuel	78 25
" Taxes	9 36
" Phonographic Exhibition	15 00
" Architect	50 00
" Customs charges and brokerage	3 00
" Advertising	7 75
" Sundries	19 35
" Interest	212 00
" Promissory note	200 00
" Balance in Imperial Bank	137 00
" Cash in hand	38 07
	$2,408 61

Examined and found correct.

(Signed) ARTHUR HARVEY, } Auditors.
J. B WILLIAMS, }

JAMES BAIN, JR., IN ACCOUNT WITH ARCHÆOLOGICAL GRANT.

To Government Grant for 1888-89	$1,000 00
" Balance forward	35 45
	$1,035 45

By Purchase of specimens	$ 550 00
" " cases	91 65
" Engraving and printing of specimens for Report	102 50
" Travelling expenses and remuneration of Curator	285 67
" Bank charges	38
" Balance on hand	5 25
	$1,035 45

Examined and found correct.

(Signed) ARTHUR HARVEY, } Auditors.
J. B. WILLIAMS, }

ASSETS AND LIABILITIES.

ASSETS.

Building	$11,500 00
Warehouse	720 00
Ground	3,000 00
Library	5,000 00
Specimens	2,000 00
Personal Property	1,000 00
	$23,220 00

LIABILITIES.

Mortgage No. 1, due 1892	$3,000 00
" " "	1,000 00
Balance in favor of the Institute	19,220 00
	$23,220 00

The Auditors having carefully gone over the accounts and vouchers beg to report.

That the cash accounts kept by Mr. Young are in perfect order.

That the distribution into the various heads of income and expenditure, made by Mr. Bain, the treasurer, corresponds therewith.

Your Auditors think it would be wise to have a proper valuation made of the various assets of the Institute—Library, museum and building, and to procure by this means a reliable statement of its Assets and Liabilities—and recommend the subject to the consideration of the Council.

(Signed) ARTHUR HARVEY }
J. B. WILLIAMS, } Auditors.

Canadian Institute, Toronto,
April 25, 1889.

APPENDIX III.

Classification of Papers.

Classification of papers read, by subjects:—Anthropology, 1; Archæology, 3; Astronomy, 2; Chemistry, 2; Economics, 1; Geology, 3; History, 2; Mathematics, 1: Miscellaneous, 3; Philology, 3; Political Science, 1; Physics, 3; Physiology, 1; Sanitary Science, 2; Social Science, 1; Sociology, 2; total, 31 papers read at 24 meetings.

Read at the meetings of the Biological Section, 22 papers; Architectural Section, 3; Geological and Mining Section, 5; Philological Section, 9 papers; total, 39. Making in all 70 papers.

APPENDIX IV.

Librarian's Report.

The statement for the Library for the year 1888-89 is as follows:

I. Donations to the Library		85
II. Exchanges:		
1. Canada	138	
2. Great Britain and Ireland	481	
3. United States	569	
4. Mexico and South America	43	
5. Austria-Hungary	150	
6. Belgium	54	
7. Denmark	4	
8. France and Algeria	396	

9. Germany	106	
10. Italy	146	
11. Netherlands	25	
12. Norway	30	
13. Portugal	7	
14. Russia	37	
15. Spain	18	
16. Sweden	18	
17. Australia	31	
18. British India and China	34	
19. Japan and Java	20	
Total		2,307
III. New exchanges	39	
IV. Total number of exchanges	435	
V. Periodicals subscribed for, same as last year with the exception of "Hardwicke's Science Gossip," which has been discontinued	31	
Total single copies of these received	769	
VI. Number of volumes bound during the year		306
VII. Number of publications taken from Reading Room and Library during the year		1.900

All of which is respectfully submitted.

GEO. E. SHAW,
Librarian.

REPORT OF THE BIOLOGICAL SECTION.

The section has to report a year of progress and prosperity.

The regular fortnightly meetings have been held throughout the year, and the attendance has been satisfactory.

A schedule is attached showing the papers read—22 in all.

As this section is to a large extent educational in its objects, it is not required that the papers read should be the result of original research, and we would welcome the assistance of some of the many members of the Institute who are well qualified to give us much information that would both interest and instruct.

The microscope which our last report mentioned as having been purchased but not then arrived, has been received, and by its means many points in the papers read before the section are illustrated, and the enthusiasm of those members engaged in the study of minute forms of life, has been quickened. The microscopical curator will always be ready to attend meetings of the Institute, or other sections, when the use of the instrument is desired. A small collection of slides has already been secured for the section's cabinet, and more are expected.

Two years ago when the Institute contemplated the completion of the museum upstairs, this section became responsible for two years for the interest on the mortgage of $1,000, which was given to raise the necessary funds, and we are glad to say that this has been paid, and the section is now free from debt or liability.

Not much progress has been made in our department of the museum. We merely desire to draw attention to the fact that biological specimens cannot be mounted without money, and that our section has absolutely no source of income except grants from the Council of the Institute.

W. E. MIDDLETON,
Secretary of Biological Section.

The officers for next year are: James H. Pearce, President; W. E. Middleton, Secretary.

SCHEDULE OF PAPERS.

1.	E. E. Thomson	*Canadian Birds.*
2.	Rev. K. F. Junor	*Echini.*
3.	J. H. Pearce	*Inaugural Address.*
4.	M. Chamberlain	*Canadian Birds.*
5.	J. Noble	*Mosses* (First Paper).
6.	"	" (Second Paper).
7.	Wm. Brodie	*Parasites of Potato Beetle.*
8.	Wm. Brodie	*Lemothrips Graminœ.*
9.	J. H. Pearce	*Flowers* (First Paper).
10.	"	" (Second Paper).
11.	W. E. Middleton	*Fresh Water Sponges.*
12.	J. B. Williams	*Birds Observed in 1888.*
13.	Wm. Brodie	*Snakes.*
14.	W. E. Middleton	*Structure and Fructification of Ferns.*
15.	C. Armstrong	*Canadian Ferns.*
16.	Wm. Brodie	*Relation to Environment.*
17.	E. E. Thompson	*Winter Birds of Toronto District.*
18.	J. H. Pearce	*Moulds and Kindred Fungi.*
19.	W. E. Middleton	*Microscopic Mounting.*
20.	James Noble	*Plant Evolution.*
21.	James Noble	*Plant Development.*
22.	A. Elvins	*Volvox Globator.*

REPORT OF THE PHILOLOGICAL SECTION.

Gentlemen,—I have the honor to present for your consideration the Third Annual Report of the Philological Section, for the year ending March 31, 1889. During the session the section has met regularly on the second and fourth Tuesdays of each month.

Following is a list of papers read at the various meetings:

(1) April 10, 1888—"A Chart of Elocutionary Drill." By T. B. Browning, M. A.
(2) April 24, 1888—"Volapük, the New World-Language." By D. R. Keys, B. A.
(3) April 24, 1888—"On some words of Indian origin in the French Canadian Dialect and Literature." By A. F. Chamberlain, B. A.
(4) November 13, 1888—"The language of the Mississaguas of Scugog, with special reference to Sematology." By A. F. Chamberlain, B. A.
(5) November 27, 1888—"The Semitic Vowels." By Rev. Prof. McCurdy Ph.D.
(6) January 8, 1889—"The Origin and Development of Grammatical Gender." By A. F. Chamberlain, B.A.
(7) January 22, 1889—"Language Learning and Language Teaching." By William Houston, M.A.
(8) February 12, 1889—"The Gaelic Vowel System." By David Spence, Esq.
(9) " 26, 1889—"The Gaelic Consonants." " "

During the month of March the section continued the investigation of the Gaelic Language introduced by the papers of Mr. Spence, of whose valuable assistance it was enabled to avail itself. On the 8th January, 1889, the Rev. J. F. McCurdy, Ph.D., resigned the office of chairman of the section, to which position Mr. D. R. Keys, B.A., was duly elected.

The officers for the ensuing year are:—Chairman, D. R. Keys, M.A.; Vice-Chairman, Jno. Squair, B.A.; Secretary, A. F. Chamberlain, M.A.

(Signed) A. F. CHAMBERLAIN,
Secretary Philo. Section, C. I.

REPORT OF THE GEOLOGICAL AND MINING SECTION.

Gentlemen,—Very much interest continues to be manifested by the members of this section, in the study and discussion of those subjects which form the specialty of our organisation.

At the various meetings which have been held during the year, the attendance has been good.

At the first meeting of the sessional year, communications were read from the Department of the Interior, referring to measures taken by that Department for collecting and publishing statistics and other information on the mining and metallurgical interests of the Dominion, and enclosing a copy of an Order-in-Council on the same subject, approved by the Governor-General in Council; also referring to an interview had by the chairman and secretary of this section, with the Deputy Minister of the Interior, on the subjects of (1) Prompt publication of the Survey's reports on mining affairs; (2) Coöperation of the Dominion and Provincial Governments in the collection of such information, and (3) Legislation making the furnishing of such information compulsory.

In thus directing the attention of the authorities to an important subject, the section has been able to do good work, and recent publications of reports justify the action taken by this section.

A number of interesting papers have been read during the year, and the discussions arising therefrom have aided materially in familiarizing many with facts relative to the minerals and mineral resources of our Province.

The Section has also taken much interest in the project of eastablishing in this city a Provincial Mineralogical Museum, and trusts that its efforts in this direction may yet be crowned with success.

Officers have been elected as follows for the current year:

Chairman—W. Hamilton Merritt.

Vice-Chairman—Arthur Harvey.

Secretary and Curator—David Boyle.

Managing Committee—R. W. Phipps, A. F. Chamberlain, A. Elvins, John Notman, P. H. Bryce, M.D.

The present year is confidently regarded by the section as likely to prove more than usually profitable to the section in all that relates to the investigation and study of geology and mining in Ontario.

W. HAMILTON MERRITT,
Chairman.

ARTHUR HARVEY.
Vice-President.

DAVID BOYLE,
Secretary.

PAPERS READ DURING THE SESSION.

Mr. Harvey—"On Certain Lacustrine Deposits;" "On the Synclinal Trough of Lake Superior."

Mr. Merritt—"The Iron Ranges of Northern Michigan and Minnesota;" "Laurentian Formation of New Jersey, with relation to the Iron Mines therein."

Mr. Mills, of St. Ignace, Michigan—"Iron Smelting Furnaces."

REPORT OF THE ARCHITECTURAL SECTION.

Gentlemen—The members of the Section have met fortnightly during the Session, the meetings being chiefly occupied by instructive and interesting discourses, theoretic and practical, delivered by some of the prominent Architects and Master Mechanics of this city, who commended and encouraged the objects and motives of the Section, promising and offering us their entire sympathy and support.

The following were among the papers read and debated upon, being subsequently published in the *Canadian Architect:*
"The responsibilities of Students to their Profession," by R. R. Gambier Bousfield, A.R.I.B.A.; "Subsoil Irrigation," by E. Burke, Architect; "A Discourse on Carpentry," by R. Wilson.

Besides the papers and addresses, competitions were engaged in in designing Bay windows, Oriel windows, Entrances, etc.

At the close of the Session the following officers were elected: Robert Dawson, Chairman; Chas. D. Lennox, Treasurer; J. Fras. Brown, Secretary.

Yours verily,

J. FRAS. BROWN, *Secretary*.

REPORT OF THE SOCIOLOGICAL COMMITTEE.

The Committee on Sociology begs leave to present its report for the year 1888-89.

1. Your Committee was constituted at the first meeting of Council this year and at once procured a circular, which appears in the last *Fasciculus* under the heading "Sociological Circular," to be drawn up, printed and distributed chiefly to the following classes of persons:

(1) Indian agents, farm instructors, inspectors, teachers in Indian schools in Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward's Island, Manitoba, the North-West Territorities and British Columbia.

(2) Magistrates, inspectors of North-West Mounted Police, registrars, clerks of the peace, members of Council in North-West.

(3) Missionaries of the leading churches: Church of England, Roman Catholic, Presbyterian, Wesleyan.

More than a thousand copies have been distributed, so that your Committee is of opinion that the circular has found its way to most persons in the Dominion who are interested in Indian questions.

2. Your Committee has received material assistance from the Hon. Edgar Dewdney, Superintendent-General of Indian Affairs for the Dominion, the Hon. A. S. Hardy and the Hon. G. W. Ross, Ministers respectively of Crown Lands and Education of Ontario ; is deeply indebted to the newspapers, educational, religious and legal press of Canada for bringing the subject to the attention of the public, and for extended and favorable notices of the Committee's work; also to the following periodicals: Magazine of Western History, Popular Science Monthly, Journal of Anthropology of the United States, Historical Review and Law Quarterly of England.

3. At the request of your Committee the Canadian Pacific Railway has kindly consented to carry archæological and natural history specimens free of charge for the Institute.

4. The publication of the Indian Treaties of Canada and the Provinces has engaged the attention of your Committee. The Council and Institute will, no doubt, be pleased to learn, from the accompanying letter of Mr. Vankoughnet, that this important work is under way and will shortly be completed. The correspondence on the subject is herewith submitted. Copies of the Dominion Reports on Indian Affairs from 1875 up to and inclusive of 1888 have been received for the use of the Institute, for which your Committee has duly returned its thanks to the Superintendent-General.

5. In reply to the circular a number of letters and abstracts have been received, among them

(1) A short abstract from the Rev. T. S. Cole, B.A.

(2) An interesting letter from Inspector A. Bowden Perry of Prince Albert, North-West Territories, which your Committee begs to submit to the Editorial Committee for publication, together with a detailed paper on

(3) "The Western Déné," by the Rev. A. G. Morrice, O.M.

A number of other papers are promised, principally by reverend gentlemen whose duties bring them into direct contact with the Indian population of Manitoba and the North-West.

6. Your Committee begs leave to reserve such remarks of a sociological nature as it may desire to make for the separate papers as they appear, suggests that the circular be re-issued with such alterations and additions as may seem proper, and entertains the hope that the success which has accompanied its efforts this year will be redoubled in the year to come to the common benefit of the Institute, its members and the country.

All which is respectfully submitted on behalf of the Committee.

T. B. BROWNING,
Chairman.

ARCHÆOLOGICAL REPORT.

By David Boyle.

To the President and Members of the Canadian Institute:

Gentlemen,—It is gratifying to be able to state that the interest in archæological matters has increased very considerably throughout the province, since the inception of our scheme to place ourselves as nearly as possible abreast of other countries in this respect. The hope expressed in our first report, that "its appearance would tend to arouse a more general interest in the subject," has thus been realized. The activity, however, has been mainly displayed in the work of collecting, Old collectors have been encouraged to go on, and many new ones have entered the field. On this account there is no doubt that much valuable material will be preserved, which otherwise would have been lost, but as a consequence, there is now greater difficulty in adding specimens to our collection. Ultimately, it is probable that many amateur lots will find their way to the provincial museum, and already several assurances have been given to this effect by individual collectors. Another good result arising from our project, is the very general determination arrived at by almost all who pick up specimens, not to let them go out of the country. In a few instances collectors seem to be mainly actuated by mercenary motives, but as a rule they are really *amateurs.* Among the latter are some who take the broad, public-spirited view, that it is better to place their "finds" in a large collection, where every one may see them, than to retain them at home for merely personal gratification.

On a list of such for the past year, the Institute must place the names of Messrs. R. W. Reavley, B.A., Teacher, Tilsonburg; R. D. George, Teacher, Fonthill; William and David Melville, Creemore; Dugald Carrie, Teacher, Creemore; Cyrenius Bearss, Sherkston; Wm. Michener, Sherkston; Isaac and Ezra Bearss, Sherkston; John N. Boyle, Braeside, Richmond Hill; Dr. R. Orr, Maple; William and Robert Lougheed, Smithdale; Herbert and Theophilus Connor, Glenhuron; Thomas White, Cashtown; Thomas Boon, Bothwell; Mrs. Barney, senior, Sherkston; Geo. Muma, Humberstone; Mr. John McPherson, Toronto; Miss Kirkwood, Toronto; Wardie and Ottie White, Toronto; Joseph Smelser, Vaughan; Luke Mullock, Waterdown; Major J. M. Delamere, Toronto; Wm. Welsh, Amberley; Rev. John McLean, Moosejaw, N. W. T.; Angus Buie, Nottawasaga, and Clarence Bell.

Thanks are also due to a large number of persons in various parts of the province, who have supplied information of great value. The names of some of these gentlemen, with a statement of the results arising from their communications, will be found in the present report. In other cases the work remains to be done.

Owing to some misunderstanding, the number of reports printed last year was considerably less than for the year previous. On this account I believe that even the members of the Institute were not supplied with them, and many applications for copies have had to be refused. This year it is hoped that a large enough number will be struck off, to supply all who are interested.

I have already stated that the increased archæological activity recently displayed among amateurs, has manifested itself chiefly in the work of collecting. This is good so far as it goes, but does not accomplish what is required from the Institute's standpoint. For present and future use are demanded at least moderately accurate surveys of all aboriginal locations, with drawings of fortified works, and exact data relating to materials, patterns, depths, soils, ash-heaps, position of bodies, with particulars relating to skulls, modes of burial, presence or absence of European influences, and many other details requiring experience, time and labor to record satisfactorily.

Mr. A. F. Hunter has devoted considerable time and done a good deal of travelling, for the purpose of locating villages, potteries and ossuaries, in townships formerly occupied by the Hurons. His paper on that district is exceedingly interesting, and will enable any future explorer with "reasonable means," to economize time in making a more detailed survey, or in excavating for relics.

Having begged permission from Dr. Francis Parkman, the historian, to quote from his works for use in this report, in connection with the work done in Simcoe county, a prompt and courteous reply was received from that gentleman, granting the favor asked. In this note Dr. Parkman wrote:

"I infer from what you write, that you are making investigations in the old Huron country. Should the result be printed, I should be glad if you would let me know of it."

Copies of our two former reports having been mailed to him, he afterwards wrote:

"Thank you for the two reports of the Canadian Institute which you have kindly directed to be sent me. It is certainly in the power of the Institute if it has reasonable means at its disposal, to do good service to American archæology, by exploring the Indian remains of Ontario, and above all those of the old Huron country, including that of the Tobacco nation. I am glad a beginning has been successfully made in this direction, and hope that the Institute will be enabled to continue its work, before the spread of settlement makes such researches difficult or impossible.

"Yours very truly,

"F. PARKMAN.

"Boston, 3rd July, 1889"

It is inspiriting, even inspiring, to know that we have the countenance of so high an authority, the very highest in fact, in all that appertains to the history of American and more especially (so far as we are concerned), of Canadian Indians. No one better than he can fully estimate the value of such investigation, in their bearing upon the past and present European relations of the Aborigines to the history of our country, for no one else has devoted so much of a busy life-time to the patient, arduous and scholarly study of Canadian colonial development, the results of which are embodied in a series of volumes, that are perhaps unequalled in the historic literature of any other land in the world.

It would be difficult to conjecture what Dr. Parkman regards as "reasonable means" at the disposal of the Institute, whereby "to do good service to American archæology," and he would probably be incredulous were he informed as to the smallness of the sum that has been spent by us in three years, for the purpose in question—a sum which has covered payment of services, travelling expenses, employment of manual labor, purchase of specimens, express and freight charges, supply of show cases, printing of circulars and labels, postage and engraving.

During the meeting of the American Association for the Advancement of Science, many of the most distinguished ethnologists and archæologists on this continent, examined our collection of illustrative specimens, and their remarks on the extent and character of the museum were such as to afford the Institute satisfaction with what has been accomplished, as well as encouragement for future prosecution of work in the same direction.

Prof. Putnam, of the Peabody museum, which has one of the largest collections of this kind in the United States, said that in proportion to its size, our museum contained a greater variety of unique and instructive specimens, than any other he had ever seen.

Dr. Abbott, of Trenton, New Jersey, expressed himself as being especially pleased with the contents of the cases containing ornaments and implements of bone.

Rev. Mr. Beauchamp declared that our collection of stone "bird-amulets" was superior to anything of its kind in any American museum.

Prof. Morse, of the Essex Institute, Mass., was surprised to see the variety of pottery patterns.

Several of the visitors recorded their opinions on the pages of our register, and from these the following are quoted:

Mr. A. E. Douglas, of the Museum of Natural History, New York, wrote:—"I consider this collection is almost unique in objects of great interest to archæologists." Mr. Douglas is himself, the owner of one of the largest private collections in America. It is on permanent exhibition in the New York museum.

The Rev. W. M. Beauchamp, of Baldwinsville, New York, and an *attaché* of the Smithsonian Institute, Washington, expresses himself as follows:—"I have been greatly pleased and profited by examining the valuable collection of Indian articles in the Canadian Institute, among which are some that are beyond price to an antiquarian, and will prove of the highest use in solving some questions of early history. Ontario will soon have reason to be proud of such treasures." Mr. Beauchamp is now employed in getting together for the Smithsonian Institute just such information relative to the Hurons, as Mr. A. F. Hunter and myself employed a portion of the past season in procuring for the Institute.

Mr. Chas. W. Smiley, who is also connected with the Department at Washington, wrote:—"Here is a fine collection, which we should appreciate in Washington very highly. Whatever more can be obtained and added before it is too late, should be secured *at once.* Unless Ontario gather up her scattered materials soon, they will be taken away to enrich museums abroad. Now or never!"

Few persons are better qualified than Dr. C. C. Abbott, of Trenton, New Jersey, to express an intelligent opinion in relation to matters of this kind. He has devoted many years to archæological study, and is the author of several works on the subject. His immense private collection is on view at the Peabody Museum, Cambridge, Massachussetts. Dr. Abbott has left us the following record:—"I have examined the archæological collection of this Institute, and am delighted with it. Its value for scientific purposes is very great, and already there is gathered here the material for comparative study, so much needed by students of archæology. Collections of given areas as complete as possible, are the requirements for finally solving the problem of North America's aboriginal peoples; and I earnestly pray that not only the citizens of Toronto, but the Provincial Government, will be exceedingly liberal in assisting those who have made so admirable a collection as is here brought together."

The time of Prof. Putnam was so fully occupied in the performance of his duties as secretary of the A. A. A. S., that he had but little leisure to do more than make a few brief visits to the museum. The following sentence however, may be quoted from what he has written:—"I have found here very much of importance to me in my study of the skulls of American peoples." Prof. Putnam ranks among the first of American ethnologists and archæologists, and it was exceedingly gratifying to receive from him, both orally and in writing, so high an opinion of the work that has been done.

It is a matter of some regret that Prof. Putnam's visit to the city did not occur a few weeks later, as during that time we more than doubled our collection of crania, several specimens of which exhibit notable peculiarities, one at least having the Inca bone well marked.

"THE LAND OF SOULS."

"We come from the Land of Souls, where all is sorrow, dismay, and desolation. Our fields are covered with blood; our wigwams are filled, but with the dead, and we ourselves have only life enough left to beg our friends to take pity on a people drawing near their end." Petition of the Hurons to the Andastes in 1647. Raguenau, *Relation des Hurons.*

The vast number of communal and other burial places that may still be traced over the area formerly occupied by the Hurons, evidence the density of the aboriginal population and afford a reason for the poetic title given by the natives to their dying country, when they besought their kindred on the Susquehanna for assistance, nearly two-hundred and fifty years ago.

Having spent considerable time last June in the township of Nottawasaga for the purpose of mapping the district, marking the ancient village sites and ossuaries, and collecting specimens, I cannot do better than quote from Parkman, a brief description of that land and its people.

"In the woody valleys of the Blue Mountains, south of the Nottawasaga Bay, of Lake Huron, and two days journey west of the frontier Huron towns, lay the nine villages of the Tobacco Nation, or Tionnontates;* In manners as in language they closely resembled the Hurons. Of old they were their enemies, but were now at peace with them, and about the year 1640 became their close confederates. Indeed in the ruin which befel that hapless people, the Tionnontates alone retained a tribal organization; and their descendants, with a trifling exception, are to this day the sole inheritors of the Huron or Wyandot name. Expatriated and wandering, they held for generations a paramount influence among the western tribes. In their original seats among the Blue Mountains, they offered an example extremely rare among Indians, of a tribe raising a crop for the market; for they traded in tobacco largely with other tribes. Their Huron confederates, keen traders, would not suffer them to pass through their country to traffic with the French, preferring to secure for themselves the advantage of bartering with them in French goods at an enormous profit." †

If other reasons were wanting, the facts cited in the foregoing quotation are sufficient to interest us in all that pertains to a people so exceptional in many respects to other aborigines inhabiting this part of the continent. The axe and the plow are rapidly removing every land-mark; already many have been obliterated, but a large enough number remain to attest the truth of all that has been stated regarding the population, which was reckoned at from twenty thousand to thirty-five thousand. *

---

* The district formerly occupied by the Tobacco Nation, and now included within the limits of Collingwood, Nottawasaga and Sunnidale townships, held, within recent geological time, a very different relation to the great fresh water sea from what it does at present. The proofs are everywhere abundant that the valley drained by the Nottawasaga River was at one time a prolongation of Nottawasaga Bay, connecting the waters of Lake Huron and Lake Simcoe, and bounded westwards by the gentle slopes of the "Blue Mountains," so-called; for the term is a misnomer, where we take into account that these elevations seldom if ever exceed 500 feet, above the lake level, and are cultivated from base to crown.

† Parkman, The Jesuits in North America. Introduction, p. xliii, 21st edition. Boston, 1885.

If we regard the nine villages or towns of the Tionnontates or Tobacco Nation, as having been of average population with the remainder of the thirty-two all of which were reckoned in 1639, to contain thirty thousand souls, it would appear that the population of the Blue Mountain district was not less than five thousand five hundred, but if we make allowance for the agricultural habits of the Tobaccoes and their consequently less persistent warlike proclivities, it is probable that the number of the people fell little short of eight thousand, about the year 1640.

Even with half that number the country of the Tobacco Nation must have been well populated, when it is borne in mind how large an area is required for the support of those who depend more or less on the results of the chase for their livelihood.

Some of the ossuaries, or communal burial pits have been estimated by intelligent settlers who have opened them, to contain from five hundred to fifteen hundred skeletons. Making due allowance for exaggeration in viewing the spectacle of immense quantities of bones, without any effort to assort them or otherwise make an exact count, it seems to be capable of proof, that fully a thousand skeletons have been found in a single pit. One settler informed me that he had counted upwards of nine hundred skulls almost whole, and assured me that there must have been from one hundred to two hundred others in a fragmentary condition. Dr Taché of Quebec, writing to Dr. Parkman, says, "I have inspected sixteen *bone-pits.* * * * * * * They contain from six hundred to twelve hundred skeletons each." Most of these ossuaries, known locally as "bone-holes," are of post-European date and contained copper or brass kettles. Here, as in the township of Beverly (mentioned in a former report,) the pioneer settlers, or some of them rather, made it their business to open every known grave-pit, for the purpose of procuring these utensils, sometimes to the number of twenty or more from one place. All those I opened last summer had been previously ransacked, and I think I am safe in saying that it is now almost impossible to find within the ancient limits of the Tobacco Nation, or inded any where in the old Huron country, an ossuary that has been left undisturbed.

Even, however, at the time when these burial-pits were first opened, many of them were totally devoid of anything save promiscuously interred bones, and we are thus brought face to face with the fact that it was *not* the invariable custom of the aborigines to deposit tools, utensils and ornaments with human remains, at any rate, during the latter days of savage existence in this part of the world. That the custom was much more prevalent in former times there is little doubt, but it is my own experience as well as that of others, that graves evidently of prehistoric date have been found wholly destitute of material for the use of the departed spirits. This may be accounted for either on the supposition that the bodies were hastily interred after some bloody affray, and in proximity to the enemy, by those who were defeated, or, that those who succeeded in maintaining their ground after an engagement thus buried the slain of the discomfited party. I am not aware that any such record exists, but nothing can be more reasonable than to conclude that the victors would hasten to bury the bodies of those who had been killed, especially when the fighting had taken place as it so often did at, or close to, a village, and when it involved less trouble and inconvenience to bury the dead than to strike camp and leave the bodies exposed. In the Huron country this must frequently have been a powerful reason, where clearings were made for simple agricultural purposes, and dwellings were erected of a more permanent type than that of the Indian who subsisted altogether by hunting.

---

* "The number of the Huron towns changed from year to year. Champlain and Le Caron, in 1615, reckoned them at seventeen or eighteen, with a population of about ten thousand, meaning, no doubt, adults. Brébeuf, in 1635, found twenty villages, and, as he thinks, thirty thousand souls. Both Le Mercier and Du Quen, as well as Dollier de Casson and the annonymous author of the *Relation* of 1660, state the population at from thirty to thirty-five thousand. Since the time of Champlain's visit, various kindred tribes, or fragments of tribes, had been incorporated with the Hurons, thus more than balancing the ravages of pestilence which had decimated them."—Parkman, Jesuits in North America. Introduction—note, p. xxv.

Another reason suggests itself, namely, that numerous deaths as the result of sickness or war may have so depleted the living of personal property that nothing in many cases was left for mortuary offerings.

Account for it as we may, it is well at all events to disabuse the popular mind of a fallacy that has been confirmed by so many writers, leading to the belief that every Indian grave necessarily contains objects of human workmanship.

Nevertheless, the great feast of the dead was an occasion of vast importance when conducted according to traditional custom, and occurring as it did at intervals of several years. Brébeuf in 1636, was the first to describe fully the ceremonies attendant upon a communal burial at Ossossané or La Conception, the site of which was not far from the present village of Wyevale. The people inhabiting this district were the Attignaouentans or Bear Nation, of the Huron confederacy, among all the members of which the practices were similar. From the *Relation* of Brébeuf, and from other sources we are tolerably well informed with regard to the ceremonies in question. Dr. Parkman's vivid rendering of Brébeuf's discription may be quoted: "The body was usually laid on a scaffold, or, more rarely in the earth. At intervals of ten or twelve years, each of the four nations * which composed the Huron confederacy gathered together its dead, and conveyed them all to a common place of sepulture. Here was celebrated the great 'Feast of the Dead,'—in the eyes of the Hurons, their most solemn and important ceremonial.

* * * * * * * * * *

"The corpses were lowered from the scaffolds and lifted from their graves. Their coverings were removed by certain functionaries appointed for the office, and the hideous relics arrayed in a row, surrounded by the weeping, shrieking, howling concourse. The spectacle was frightful. Here were all the village dead of the last twelve years. * * * Each family reclaimed its own, and immediately addressed itself to removing what remained of flesh from the bones. These, after being tenderly caressed, with tears and lamentations, were wrapped in skins and adorned with pendent robes of fur. In the belief of the mourners they were sentient and conscious. A soul was thought to still reside in them; and to this notion, very general among the Indians, is in no small degree due that extravagant attachment to the remains of the dead, which may be said to mark the race.

"These relics of mortality, together with the recent corpses, which were allowed to remain entire, but which were also wrapped carefully in furs, were now carried to one of the largest houses and hung to the numerous cross-poles, which, like rafters, supported the roof. Here the concourse of mourners seated themselves at a funeral feast; and as the squaws of the household distributed the food, a chief harangued the assembly, lamenting the loss of the deceased and extolling their virtues. This solemnity over, the mourners began their march for Ossassané, the scene of the final rite. The bodies remaining entire were borne on a kind of litter, while the bundles of bones were slung at the shoulders of the relatives like fagots. Thus the procession slowly defiled along the forest pathways with which the country of the Hurons was everywhere intersected; and as they passed beneath the dull shadow of the pines, they uttered at intervals, in unison, a dreary, wailing cry, designed to imitate the voices of disembodied souls * winging their way to the land of spirits, and believed to have an effect peculiarly soothing to the conscious relics which each man bore. When, at night, they stopped to rest at some village on the way, the inhabitants came forth to welcome them with a grave and mournful hospitality.

---

* The Tobacco Nation similar in language and manners, did not join the Huron confedracy until about 1639-40.

"From every town of the nation of the Bear processions like this were converging towards Ossossané. This chief town of the Hurons stood on the eastern margin of Nottawasaga Bay, encompassed with a gloomy wilderness of fir and pine. * * * * The capacious bark houses were filled to overflowing, and the surrounding woods gleamed with camp fires: for the processions of mourners were fast arriving, and the throng was swelled by invited guests of other tribes. Funeral games were in progress, the young men and women practising archery and other exercises for prizes offered by the mourners in the name of their dead relatives. Some of the chiefs conducted Brébeuf and his companions to the place prepared for the ceremony. It was a cleared area in the forest many acres in extent. In the midst was a pit about ten feet deep and thirty feet wide. Around it was reared a high and strong scaffolding, and on this were planted numerous upright poles, with cross-poles extended between for hanging the funeral gifts and the remains of the dead.

"Meanwhile there was a long delay. The Jesuits were lodged in a house where more than a hundred of these bundles of mortality were hanging from the rafters. Some were mere shapeless rolls, others were made up into clumsy effigies adorned with feathers, beads, and belts of dyed porcupine quills. * * * * At length the officiating chiefs gave the word to prepare for the ceremony. The relics were taken down, opened for the last time, and the bones caressed and fondled by the women amid paroxysms of lamentation. Then all the processions were formed anew, and each bearing its dead, moved towards the area prepared for the last solemn rites. As they reached the ground they defiled in order, each to a spot assigned to it on the outer limits of the clearing. Here the bearers of the dead laid their bundles on the ground, while those who carried the funeral gifts outspread and displayed them for admiration of the beholders. Their number was immense and their value relatively very great. Among them were many robes of beaver and other rich furs, collected and preserved for years with a view to this festival. Fires were now lighted, kettles slung, and around the entire circle of the clearing, the scene was like a fair or caravansary. This continued till three o'clock in the afternoon when the gifts were repacked and the bones shouldered afresh. Suddenly at a signal from the chiefs, the crowd ran forward from every side towards the scaffold, like soldiers to the assault of a town, scaled it by rude ladders with which it was furnished, and hung their relics and their gifts to the forest of poles which surmounted it. Then the ladders were removed and a number of chiefs, standing on the scaffold, harangued the crowd below, praising the dead and extolling the gifts, which the relatives of the departed now bestowed in their names upon their surviving friends.

"During these harangues other functionaries were lining the grave with robes of beaver skin. Three large copper kettles were next placed in the middle and then ensued a scene of hideous confusion. The bodies which had been left entire were brought to the edge of the grave, flung in, and arranged in order at the bottom by ten or twelve Indians stationed there for the purpose, amid the wildest excitement and the uproar of many hundred mingled voices. When this part of

---

* It is not easy to conjecture where they got their model for this imitation.

the work was done night was fast closing in. The concourse bivouacked around the clearing and lighted their camp-fires under the brows of the forest, which hedged in the scene of the dismal solemnity. Brébeuf and his companions withdrew to the village, where an hour before dawn, they were roused by a clamor which might have wakened the dead. One of the bundles of bones, tied to a pole on the scaffold had chanced to fall into the grave. This accident had precipitated the closing act and perhaps increased its frenzy. Guided by the unearthly din and the broad glare of flames fed with heaps of fat pine logs, the priests soon reached the spot, and saw, what seemed in their eyes, an image of Hell. All around blazed countless fires and the air resounded with discordant outcries. The naked multitude on, under and around the scaffold, were flinging the remains of their dead, discharged from their envelopments of skins, pell-mell into the pit, where Brébeuf discerned men who, as the ghastly shower fell among them arranged the bones in their places with long poles. All was soon over, earth, logs and stones were cast upon the grave and the clamor subsided into a funereal chant, so dreary and lugubrious, that it seemed to the Jesuits the wail of despairing souls from the abyss of perdition.* "

This most vivid and succinct description of one great burial ceremony may be regarded as being applicable in a general way to all other great feasts of the dead. It is probable that the various nations, composing the confederacy, differed to some extent in matters of detail, and there is reason to believe that in at least one important particular, the Tobacco Nation differed from the Hurons proper. Referring to the first disposal of the dead, as may be gathered from the foregoing extract, Dr. Parkman says, "The body was usually placed upon a scaffold, or, more rarely, in the ground." When we bear in mind the settled habits of the Tionnontates or Tobaccoes and the somewhat limited area they had to occupy, we can readily see that the scaffolding of dead bodies was not so well adapted to them as to peoples who led a roving life over vast extents of country. I have accordingly found numerous evidences that among the Tobacco Nation, inhumation, was the prevalent, if not the sole mode of preliminary disposal. On many of the farms in the Blue Mountain district, the plough has brought to light human remains that had been laid in graves singly, and not far below the surface. On lot 19 of the 7th concession of Nottawasaga, Mr. Edward Beecroft informed me that there were on the front or west end of the farm about one hundred single graves, and twice that number on the rear of his property. On the same lot an extensive village had been situated judging by the numerous deep and widely spread beds of ashes, while not far away the manufacture of clay vessels and pipes had been carried on, as is shown even yet by proofs of the most unmistakeable kind. There is a large ossuary on the same farm within a short distance of the village site.

If, therefore, we regard the existence of the village as having been contemporaneous with the individual graves, and there is no reason to doubt this, we can understand why inhumation was preferable to scaffolding.

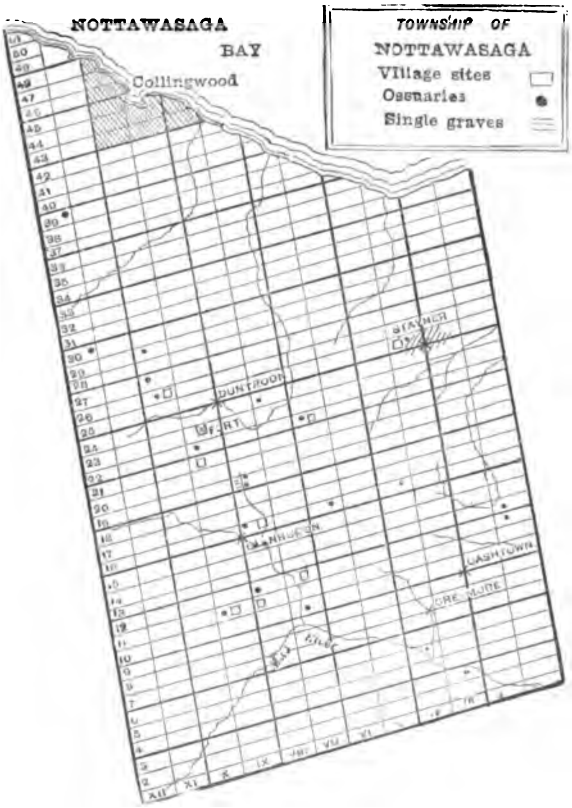
In the account of the great communal burial, quoted from Parkman, reference is made to the topography of the "cleared area in the forest, many acres in extent," and " in the midst [of which] was a pit, about ten feet deep and thirty feet wide," but is to be noted that these burial pits are almost invariably found on the top of knolls and hills ; generally the highest ground within easy reach of the town or village. * Was this practice in any way connected with the mound-building predilections of other tribes ? Did our northern Indians cease to throw up great earth heaps for such a purpose because they found so many of natural formation ? Does the construction of mounds by people occupying more level areas in any way indicate the persistence of a habit formed by their ancestors in some hill country ? Or are both practices but the survival of some ancient custom of religious or other significance derived from common predecessors ?

---

* Parkman, Jesuits in North America. 21st ed. Boston 1885. p. 72 *et seq.*

It is to be remembered that the description given by Brebeuf, is that upon which are based all the popular notions regarding Indian burials in this country. On the occasion in question there was considerable dissension among the Attignaouentons, or Bear Nation, whose feast of the dead he witnessed. A respectable minority consisting of three or four towns, refused to take any part with the others in this ceremony, and declared their intention to conduct one independently. This naturally caused ill-feeling between the dissentients and we are therefore warranted in assuming that on this account, those with whom Brebeuf was present conducted the proceedings with much more "braverie" than was their wont. No doubt the seceding towns were actuated by similar motives. Is it right then, to regard this as having been a normally typical burial ?

During the time in spent the township of Nottawasaga, I endeavored to ascertain the position of every known locality associated with the Tionnontates, and succeeded in being able to mark upon the map ten village or town sites, twenty-one ossuaries, one fortified place, and three potteries. There are no doubt other places of which nothing could be learned, as the first settlers on many farms are now dead, and every surface trace has been removed in the course of cultivation. In almost every case I examined the places, and found in only two instances that spots which had for many years been popularly regarded as "bone holes," were but natural depressions, caused probably by the infiltration of water through the sandy subsoil which was little more than a foot below the surface.



---

* I have met with only one instance of a grave on low land. This is situated in the township of Humberstone, within a short distance of Lake Erie. The flat, near the middle of which the grave has been made, is of several acres in extent, and almost surrounded by sandhills of considerable height, from forty to sixty feet. Although pipes and other relics of Indian production have been found in this ossuary, it is suspiciously connected with "white" origin, as some of the skulls taken from it, and now in our possession, appear to be those of Europeans.

A reference to the map-diagram will show that all the locations marked extend in a direction from north-west to south-east, that is to say, corresponding with the range of hills that stretch through the township of Nottawasaga. The hills extend into Collingwood and Osprey townships, but time did not permit of these places being visited. The whole of this neighborhood should be examined carefully, as soon as possible for much of it is no doubt quite as valuable archæologically as any other portion of the Nottawasaga Bay district.

Beds of askes, blackened earth, fragments of pottery and bone, flint flakes and sometimes charred corn-cobs mark the village sites. Dr. Taché is said to have prepared a map of the Huron country (including probably the Tobacco Nation,) by means of which he thought he could identify many places with those mentioned in the *Relations*, but I am informed by Mr. Douglas Boymner, Dominion Archivist, that it has never been published. * A few of the places showing traces of habitation seem to have been mere temporary camping-grounds, where the quality of the clay and the proximity of water afforded facilties for the making of pottery and pipes; others, however, judging by their extent and the depth of the ash-beds seem to have been more permanent abodes.

One of the most interesting of these village sites is on the farm of Mr. William Melville, north half of lot 10, concession 5. The proprietor informed me that in the course of ploughing over this place he had turned up large quantities of corn and corn-cobs. William and David Melville, his sons, both intelligent collectors, have picked up several whole and fragmentary pipes, a few stone and shell beads, and an excellent bone chisel upwards of eleven inches in length.† All of these they presented to our collection.

On lot 12, concession 7, is the famous Lougheed farm, from the old site on which so much valuable material has been mentioned and figured in former reports. This year again we are indebted to Master Lougheed, for some very good specimens.

Two other villages occupied what are now respectively the north half of lot 11, concession 8, and the south half of lot 11, concession 9; immediately north of the former, on lot 12 concession 8, is an ossuary, and west of the latter on the same lot there is another. About midway between these and Mr. Melville's farm there is an ossuary on lot 10, concession 7.

Due east of the Lougheed farm, on the property of Mr. Thos. White, lot 13, concession 1, there are extensive indications of former residence. Broken pottery is plentiful and pipes of stone and clay have been found. Mr. White presented the Institute with several good specimens from his farm, chief among which is a well made bone chisel nearly a foot long. From the son of Mr. Ed. Coyle, on the adjacent farm, in the township of Sunnidale, we received some clay pipes found on Mr. White's property.

South of the White farm, there is an ossuary on lot 12, concession 1.

---

* A rude map purporting to show the topography of the Huron towns as they were in 1660, was published in the Canadian Journal, for November, 1857, to accompany a paper by Mr. John Langton, "On the Early Discoveries of the French in North America." It is too confused to be worth much, beyond enabling us to see that St. Michael was south of St. Louis, or St. John north of St. Ignatius, information that may be obtained more satisfactorily elsewhere. This map showing Creuxius' topography, is from Ducreux's *Histoire Canadenses*, Paris, 1664. The Rev. Mr. Annis, of St. Thomas, claims to have located a few of the old Huron towns, but owing to the transient character of these Indian habitations, it seems impossible that we should ever be able fix with certainty the spots occupied at different times by the same people, and always known by the same names.

† Since this was written, Ah-yand-wah-wa, Ma-shuck-ah-wa-we-tong and John Settee, intelligent and educated representatives of the Ojibewa and Cree tribes on the Lake Winnipeg Reserve, paid several visits to the museum. They informed me that similar instruments are still used among their people for skinning purposes.

On the south half of lot 16, concession 4, and the north half of lot 16, concession 6, are ossuaries.

West of these on the lot 16, concession 8, the property of Mr. Conner, there is a village site from which his sons, Herbert and Theophilus have collected a good many specimens all of which they have sent to form part of our collection.

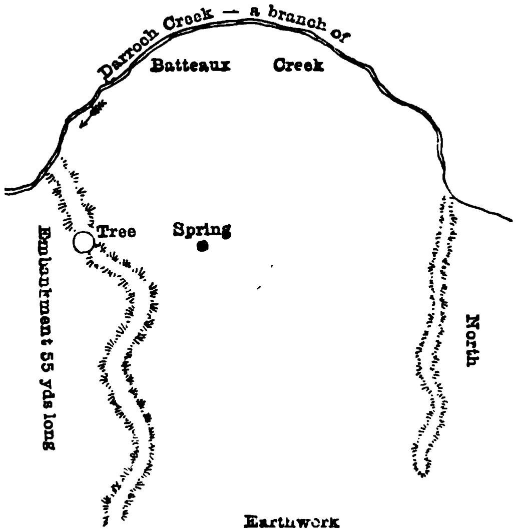
A little to the north, lot 19, on the same concession, is the Beecroft farm, on which are a village site, a pottery and a grave-pit, besides about three hundred single graves.

On lot 21, concession 9, is a village site, and on lot 22, immediately north, an ossuary.

Another village site is on lot 22, concession 5, the farm of Squire Currie, and not far away to the south-west are three ossuaries on the farm of Mr. John Edmonds, lot 21, concession 6.

There has been a village on lot 26, concession 10, on this lot there is also an ossuary.

Other ossuaries exist on lot 24, concession 7; lot 25, concession 8; lot 27, concession 10; lot 29, concession 10; and lot 30, concession 12.



Earthwork
Lot 23 (n.½) concession 9
Nottawasaga

On the farm of Mr. Wm. Anderson, north half of lot 23, concession 9, traces of an old village are visible on the face of, and near the top of a hill sloping towards the west, and at the foot of which runs a small stream known as Darroch's Creek, flowing into the larger Batteaux Creek. At this point Darroch's Creek makes a bend almost semi-circular and nearly encloses a strong spring. Between the base of the hill and the creek the land is low and level. From the extremities of the bend, banks have been thrown up stretching towards the high land. That to the north is now barely discernible, but the one on the south side can be easily traced for a distance of fifty-five yards, inclusive of its windings. In the construction of such earthworks no regularity was observed. When the nature of the ground offered any advantage the line of embankment was adapted to it, but in this case the curves were evidently made to extend from one large tree to another; one of these is still standing, the others have dissappeared, either in the partial clearing that has taken place, or in the course of nature. I was unable to discover whether this embankment had been palisaded, as I believe it was, if we suppose the construction of it had anything to do with the protection or defence of the spring.

The situation of this earthwork is remarkable. Usually we find embankments thrown up on higher ground, and serving to protect habitations; here the village was on the hill face, and overlooking the fortified enclosure. Perhaps the embankment originally extended up the hill, so as to surround the village. If so, it has disappeared during years of tillage.

The irregularity of the work points to a time anterior to French influence, for according to Brébeuf, the missionaries taught the natives of that neighborhood how to construct regular fortifications, having bastions and other European devices for defensive and offensive purposes.

Previous to this their palisaded embankments must have been far from strong, notwithstanding the enormous labor that was requirred to make them. The ground selected as a fortified dwelling place, was usually chosen on account of its natural advantages for defence, usually high ground at the confluence of two streams, or on a point formed by the sharp bend of a river. But other conditions were desirable. The soil should be loose and easily tilled; good clay for pottery and pipes should be within easy distance; the proximity of nut-bearing trees was not over looked, and a good spring of water was almost indispensable, for it is worthy of note that the Indians were evidently partial to spring water. Perhaps one reason may be found for this preference in the non-freezing quality of springs during winter. Another was no doubt the coolness of the water in summer, but in the depraved condition of their taste it is not likely they were influenced by any consideration of purity or flavor.

As has already been remarked, the labor required to build and fortify a village must have been enormous, and this mainly on account of the primitive tools employed. For edge-tool purposes stone was the chief material, copper more rarely. To effect a clearing of from five to ten acres in extent, fire was therefore to them a powerful agent, as indeed it is even to the white settler who is well provided with all "modern conveniences." Kindling a fire at the root of a tree, the charred wood was removed from time to time with their stone axes, so many of which are found all over this province, in common with many other places on the continent. These implements, of which small specimens are usually called "skining tools," were fastened to withe or to crotched handles. They were generally plain, decreasing slightly in size towards the head or pole. This shape caused them to tighten in the handle when a blow was struck. The grooved axe was a much more elaborate affair, and few of them are found either in the Huron country or elsewhere in Ontario.

The work of clearing finished, much more of a similar kind had to be done, to procure the large number of small poles to form the walls of their houses, and larger ones for the palisading, unless we assume that many such were saved during the great burning. To dig holes for the reception of these must have been tedious and difficult. Splinters of wood, pieces of bark and flat stones served for picks and shovels. Then the earth had to be thrown up round the outside of the wigwam or the "longhouse," and a ditch two or three feet deep dug along the whole line of the palisades, both outside and inside, and thrown up to form a breastwork as well as to strengthen the hold of the posts in the ground. It is to be remembered too, that these posts were sometimes in two, three, or even four parallel rows, those on one side of the embankment inclining towards those on the other, and crossing at the top where they were lashed to each other with pliable twigs and strips of tough bark. A platform of poles was laid to extend lengthwise, resting at the intersection of the palisades, and here it is said the defenders stood to pour water upon fires lighted by the besieging force to make a breech in the "wooden wall." Here also heaps of stones were piled, for use against the enemy at close quarters. In addition to the labor of erecting such a frame, the finishing touches must also have required much time and patience, for the palisades were covered to the height of six feet or more, with sheets of bark. As a whole, and considering the lack of good cutting tools, we cannot fail to be surprised at the amount of work the Hurons and other Indians accomplished, and the manner in which it was executed, although it would appear that in the art of fortification, the Hurons were excelled by their kindred the Iroquois.*

With regard to the extent and number of the aboriginal clearings in the Tobacco Nation's country, there has probably been some exaggeration. One writer has given it as his opinion that almost every square yard of land in that district, shows signs of a former clearance. It would be interesting to know what these signs were that persisted in showing themselves, after a lapse of two hundred years, now two hundred and forty. A farmer on whose property there is an old village site, told me that the trees growing upon it had smoother bark than those in the surrounding woods. I failed to observe the difference, but allowing it to be as represented, it proves too much, for even if the richer soil produced a finer bark, the coarser covering of the surrounding trees yielded no evidence of such an advantage. It is chimerical after so long a time, to look for surface indications of this kind, where the upturned roots of trees from three to four feet in diameter, sometimes disclose flakes of flint, broken pipes and fragments of pottery.

Still it is plain that the agricultural operations of the Tionnontates were comparatively extensive, for the density of the population made game scarce, and their chief food consisted of maize or Indian corn, raw or roasted, or boiled with flesh and fish. This grain they stored in caches or pits. The only evidence now existing of the use of corn are the charred cobs and grains found among the ashes of old dwellings.

Our knowledge of aboriginal vegetable diet is not very extensive, but it would appear that in addition to maize, they cultivated sunflowers, pumpkins and beans, all of which were probably introduced from southern sources. Wild fruits, especially plums, were moderately plentiful about the Georgian Bay, and the district is at the present time noted for its cultivated varieties of this fruit. Cherries, gooseberries, raspberries and strawberries, though not abundant were no doubt added to their scanty list of tid-bits, and beech-nuts could sometimes be gathered in considerable quantities. They no doubt made use of maple sap during early spring, but their traditional manufacture of sugar by boiling is a little dubious.

From a coarse hemp the women twisted strong cord or twine, which was used chiefly in making nets and constructing wigwams. From coarse grasses and sedges they wove mats and articles of clothing. Baskets were made in the same way and from similar material. In these were formed at least a few of the clay vessels, fragments of which are so plentifully found.

There is perhaps no single article of aboriginal manufacture with which the popular imagination so intimately associates the Indian, as the birch-bark canoe, and the Hurons were adepts in the art of building this frail type of vessel. The capacity and strength of these boats when compared with their lightness, were wonderful. One man could with ease carry across a portage, a canoe large enough to hold five or six persons. Scattered remnants of these people continue to make birch-bark canoes, as is also the case with many Algonkin tribes who have lost the art of producing almost everything else that was characteristic of the stone age in America.

---

* "The forts of the Iroquois were stronger and more elaborate than those of the Hurons; and to this day, large districts in New York are marked with frequent remains of their ditches and embankments." Parkman, Jesuits in North America, Intro. p. xxix.

As might be expected, the Tionnontates displayed much ingenuity in the making of pipes. Those of clay were by far the more numerous, but many fine specimens have been found carved from stone. In size the bowls vary from that of a small thimble and of far less capacity, to upwards of three inches in length. In clay pipes the hole is often so small, that a modern smoker would require to fill one several times before getting a satisfactory smoke—in stone pipes the capacity is usually much greater. In form there is considerable variety, one of the most common patterns being the flared or trumpet-mouthed head ; a second has the margin compressed, forming a heavy collar round the upper third of the bowl; another kind has a square mouth, and occasionally a specimen is found upon which the human face or whole form is represented.

It seems probable that pipes as well as tobacco were produced for commercial purposes. The pipes found in the country inhabited by the Attiwandarons along Lake Erie, are undistinguishable in any way from those that are so comparatively abundant in the district occupied by the Hurons. This is particularly noticeable in the square-mouthed pipes, which are of the least common type any where, and in the manufacture of which there appears to have been almost perfect adherence to a regulation pattern. Of course it is easy to suppose that peoples even so widely separated might conform in their tastes, as to designs, patterns and forms, but when it is taken into account that the Attiwandarons or Neuters had easy access to an unlimited supply of material for spear and arrow-tips, and that all the "flints" found in the Huron country appear to have come from this source, we may reasonably conclude that a system of exchange existed in these articles, and this supposition is strengthened, when it is known that extensive beds of flakings are found along the Erie shore, where the chert-bearing rock is most abundant.

Of the Tobacco Nation as distinguished from the Hurons proper, there is not a vestige left in Canada to-day. The last of the confederacy had to give way before the Iroquois, about 1652-3, when they were compelled to flee to Michilimackinac. Thence they were driven by their old foe to the islands in Green Bay, Michigan, and again from this place to the country of the Illinois. Removing westwards they reached the Mississippi, but the Sioux drove them away. They next found a resting place on Shagamigon Point, on Lake Superior, but this spot they had to abandon, and they returned to Michilimackinac about 1670-1. Their next move was southward to the neighborhood of Detroit and Sandusky, where they were known as Ouendots or Wyandots. Latterly they were removed to a western reserve, and it is now improbable that anything more than the name of Wyandot exists.

Thus has totally disappeared the Tionnontates or Tobacco Nation, a people who, although conforming in many respects to what we characterize as savage, were yet remarkable for their skill in the practice of much that is inseparable from civilization. Their relics scattered so profusely among the Blue Mountains attest the mechanical ability possessed by them, and the French missionaries leave us in no doubt respecting their agricultural and commercial tendencies While we may not feel warranted in expressing a belief that by any inherent potentiality they would, if left unmolested, have ever reached a much higher plane than that in which they were found by Brébeuf, yet it appears evident that but for the implacable enmity of the Iroquois they would, under European influences, eventually have ranked among the most progressive of American aborigines in the arts of civilized life.

In the townships adjacent to Nottawasaga, and indeed throughout the whole of the district occupied by the Huron nation, there is yet much to be recorded and considerable material to be collected. Meanwhile it is gratifying to be able to state that our cases now contain a moderately good representation of all that is procurable to illustrate the social condition of a nation which enacted so important a part in the history of Canada, whose hunting and war parties no doubt frequently trod the woods where Toronto now stands, and which, as Parkman says, was "once prosperous, and in its own eyes and those of its neighbors', powerful and great."

VILLAGE SITE AT CLEARVILLE.

On receipt of information from Mr. Thomas Boon, of Bothwell, I visited Clearville in company with that gentleman on May 31. Clearville, once a place of some importance, is a little more than a mile from lake Erie, and is situated near the south-east corner of the township of Orford, in the county of Kent.*

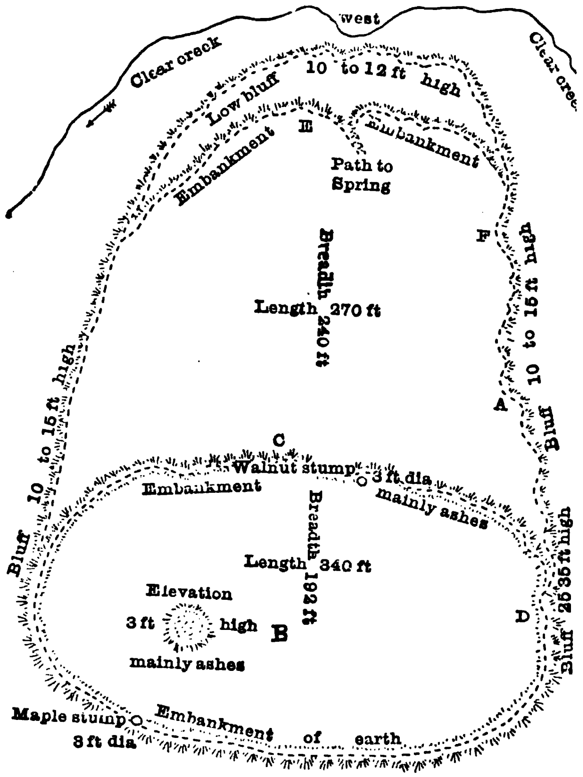
What is known as the "Fort" lies about a mile due north of the village on the property of Messrs. Ridley and Bury. Clear Creek, passes through the farm, and at this point in its flow southwards makes a considerable detour round a low terraced table land, the slopes showing evidence of former higher levels in what must have been a much larger stream. The Indians had taken advantage of the situation for domiciliary and strategic purposes, for both of which it was well adapted. The sandy loam was fitted for the cultivation of corn, the creek supplied fish in abundance, walnut and chestnut trees were plentiful in the neighborhood, and, no doubt, game was easily procured. Here were all the requisites for aboriginal happiness if only protection could be assured against attack from enemies. To effect this the natural bluffs rising from ten to thirty or forty feet above the bed of the creek were utilized. A reference to the diagram will show how this was accomplished. There appear to have been two village sites occupying different levels, but it is not easy to say whether both have been used at the same or different times, or by the same people. The western embankment of the high level site consists chiefly of ashes, and it is probable the face of the natural bluff was made to serve as a place of deposit from the camp-fires. At any rate the materials are those of a kitchen-midden—shells, bones, skulls, broken pipes and pottery, and an immense quantity of ashes. At a point a few yards south of the walnut stump the ashes formed an almost solid bed to the depth of five feet from the surface. Four feet seven inches down we found several large fragments of what must have been very capacious clay vessels. These were proportionately thick and very coarse-grained, free from any ornamentation, and quite unlike many smaller and more delicately made pieces found higher in the deposit. The fragments of flint also appeared to indicate a different source of supply, as those near the top were of a uniform grey color, while the flakes found at the greater depth were of a lighter hue and streaked with narrow dark bands. From three to four feet from the surface were taken three skulls of the common deer, a human jawbone, and pieces of pottery.

---

*Mr. Archibald Blue, Deputy Minister of Agriculture, had previously directed my attention to this locality.

Beyond taking measurements and sketching a ground-plan nothing further was done at Clearville on this occasion, as permission was required to make a thorough examination of the ground.

Having received this from Messrs. Ridley and Bury, I returned on July 16th, again accompanied by Mr. Thomas Boon, who had previously, at my request, engaged men to dig. A drive of fifteen miles from Bothwell occupied some of the first day, and openings made in a number of places brought to light large quantities of coarse pottery fragments, some bone awls or needles, and several stones, one or more surface on each of which showed that they had been employed for rubbing, smoothing, or polishing other bodies. Subsequent operations lasting two days, yielded in addition to these a very fine clay pipe head of unique pattern, a small and rudely formed old pipe, the upper half of a clay pipe in appearance like



On the second day we turned up a skull on the face of the western embankment (marked C) at a depth of three feet. Decay had proceeded too far to make it worth taking away. The day following Mr. Boon laid bare two skeletons near the edge of the northern bluff overlooking the creek (at D). These also were too far gone for preservation. Other portions of human remains were found in various places. A few small and rudely formed slate chisels, two semicircular flint "scrapers," a number of implements made from deer-horn, some unio shells, most of which were worn on the edge, as they had been used in scraping bones, were also found here.

Human remains, much decayed, were found also at A. Here there were two skeletons lying in a north and south direction, not deeper than one foot from the surface.

Mr. Blue and Dr. Bryce afterwards discovered another grave near F, but the bones were too far gone for preservation.

On the third day my sounding rod struck a "soft place," (B) which, on examination, turned out to be a grave containing the skulls and limb bones of eight persons. No ribs or other small bones were found, so that this was evidently a case of second burial. The leg and arm bones had been first thrown into the hole, and above these were placed the skulls in a cluster, without any arrangement, some lying face down, and others on one side. Five under-jaws were found. The distance from the surface of the ground to the uppermost skull was barely two feet.

When compared with those we had previously unearthed the remains in this pit were quite fresh, although some of the femora were more decayed than others, looking as if they had been underground a longer time. All these skulls were secured and are now in the museum, as are also specimens of the femora and tibiæ.

The examination of this ground was peculiarly interesting from the fact that not a vestige of European presence or influence was met with over the whole area, and numerous evidences led to the conclusion that the place must have been occupied at widely separated periods by at least two, and perhaps by three different tribes.

The earthworks, I take it, were the work of those who first perceived the advantages of the situation. At one point on the embankment near the creek (E) traces of posts or palisades were discovered, and it is probable that the whole of the lower plateau, as well as the higher one, was thus enclosed. The broken pottery found near the base of the middle embankment (C) were large and coarse and without ornament, and the flint-flakes were different in color and appearance from those nearer the surface. The houses of these people would occupy the enclosed spaces, and in accordance with this we find beds of ashes at depths varying from two to four feet, and alternating with thin layers of sand all over the area in question. A bed of ashes four feet from the surface was found below the eight skulls and other bones already mentioned. The deepest of these were probably left by those who threw up the earthwork, and this view is confirmed from the correspondence in appearance between the potsherds and flint-flakes found at the greatest depths here, with those found deep in the embankment.

By the time the second people took possession it is likely that every trace of former occupation had disappeared, and the new arrivals erected their tents or wigwams close to the middle bank on the higher, or easterly side, finding the western slope convenient as a dumping-ground for refuse. Along the central portion of the bank, north and south of the walnut stump, ashes and earth are intermingled with splintered bones, tips of deer-horn, broken shells, skulls of deer, beavers' teeth and even human remains. Unless we attribute the presence of the last mentioned to accident we shall have to accept it as evidence of cannibalism, for many of the smaller bones are split, while others are wholly or partly charred. The broken pottery found in the midden is finer than what comes from a greater depth and is relieved with simple patterns, although greatly inferior to what we see from many other places.

With few exceptions all the flint and bone specimens we found would be regarded in Europe as belonging to the palœolithic age. Even the slate chisels have scarcely more rubbing done to them than was required to produce a cutting edge.

The grave in which the eight skulls were found, I regard as being comparatively recent, and the work of a third people. Aside from the freshness of the remains in this ossuary, it is not reasonable to believe that those who fortified the place would bury within the enclosure. In addition to this the existence of ashes below the bones goes to show a more ancient possession of the spot by others. A single unio valve, worn on the edge as if it had been used as a scraper was the only thing in the grave besides the bones, and, judging from its position, its presence was probably accidental.

Although the Clearville site did not yield much of what goes to make a museum attractive, it is, nevertheless, one of the most interesting localities I know of in Ontario,on account of its situation, its three-fold (?) occupation, and its perfect freedom from even the slightest trace of the white man. Amateur collectors have at various times made openings and procured relics, and it may be that they have met evidence calculated to upset the non-European view, but I can hardly think it possible that if ever white intercourse had taken place, some proof would not have come to light in the course of our making so many openings.

The diagram of the Clearville village site is not to be regarded as having any pretensions to accuracy, although the relative proportions are correct. The measurements of the spaces enclosed by the embankments are from outside to outside, as nearly as could be ascertained. The height of the bluffs is given approximately.

Mr. Henry Watson, township clerk of Orford, and Mr. Ridley of Clearville gave material assistance to us.

TOWNSHIP OF HUMBERSTONE.

On the 12th of August Mr. Jas. Bain and myself constituted a self-appointed delegation of the Institute, and accepted an invitation from Mr. Peter McIntyre, captain of a Memphis (Tenn.) camping club near Port Colborne, to examine a quantity of Indian relics that had been discovered when digging a hole to plant a flag-pole.

I had previously written to Mr. McIntyre hoping to secure the specimens for preservation in our collection. His reply indicated uncertainty as to the ultimate disposal of the find, but expressed a wish that representatives of the Institute should, meanwhile, see what had been unearthed. We were received with genuine southern hospitality by the members, numbering about eighty, of the "Solid Comfort Club," and had the pleasure of examining several skulls, a few clay pots, some clay pipes, wampum, stone tomahawks, and a considerable quantity of material of European manufacture including glass beads, iron and copper bracelets, and iron hatchets. While rejoicing heartily with our American friends over the happy discovery they had made, our pleasure was not unmingled with a few degrees of envy, especially when we contemplated the possibility of these objects being taken away from the province, although we have reason to hope that some, or all, of them will yet find a suitable depository with us.

As illustrative of the value set upon articles of an archæological nature by Americans, it may be stated that almost immediately after the discovery was made at "Solid Comfort" camp, a highly influential deputation consisting of "honorables," municipal officials, and medical gentlemen arrived from a neighboring city in the United States to secure if possible, the "find" for their museum.

We did not return, however, from this locality empty-handed, for by a previous arrangement we met our old friend Mr. Cyrenius Bearss who has always taken a warm interest in our project, and has made himself correspondingly active in supplying information and procuring specimens. Through his instrumentality we succeeded in adding several valuable stone and other relics to our collection. These include, a very fine gouge from Mr. Gustav Utz; a tube and two cutting implements from Mr. William Michener; a bird-formed amulet (?) from Mr. George Muma; a large shell and some wampum from Mrs. Barney, senior, and two clay pipes from Mr. Isaac Bearss, Mr. C. Bearss himself presented us with a number of valuable specimens all of which are now in our cases.

TOWNSHIPS OF YORK AND VAUGHAN.

On the 5th of September, in company with Drs. Orr and Noble of Maple, Wilson of Richmond Hill, Orr of Toronto, Watson of Sherwood, the Rev. Mr. Rutledge of Richmond Hill, and Messrs. Smelser of Vaughan. I visited a village-site on a farm in the township of York. Mr. Miller the tenant was engaged in ploughing a field which had formed part of the aboriginal village ground, and a large quantity of broken pottery was picked up by the members of our party, who were well supplied with spades, and who managed to dig to a depth of two or three feet over a considerable area in the most promising places.

Many of the fragments were those of large vessels—from ten to twelve inches in circumference, and proportionately deep. A few days before this Dr. R. Orr was fortunate enough to find at this place enough fragments of an unusually large vessel, to complete the rim, and show the form of the body. Its dimensions are, externally: diameter at lip, 14 inches; greatest diameter at swell of body, 17 inches; depth, 17 inches. The upper edge of the lip is formed by four arcs making depressions about half-an-inch below the level of the points of their junction which are not equi-distant. The edge is relieved with a series of diagonal markings, and a border two inches wide consisting of upright and oblique linings surrounds the margin. Considering the enormous size of this vessel its form is not devoid of gracefulness, and the material is thinner than might be expected. Two holes about an inch apart have been bored on each of two opposite sides not far from the top. At first sight these suggest a means of suspension, but the existence of other holes lower down is puzzling, unless, indeed, we suppose that they were made for the purpose of binding fractures by means of thongs, as, in most cases, the hole is close to a broken edge. Had the crack appeared subsequent to the boring, it would most probably have passed through the hole.

Some of the pieces obtained by us were of pots nearly as large, and ornamented with a similar pattern. A very unusual kind of lip was found here. Portions of the margins have been bent inward making the outside convex, and forming a sharp angle on the inside.

The markings on all the fragments picked up at this place are good, and many of them are of unusual designs. A small and plain clay cup was turned up. Although not perfect, it is sufficiently so to show what it looked like when new. It is three inches in diameter across the mouth, and one inch and a half deep, the slope of the sides making the bottom only about two inches in diameter.

Flint-flakes appeared, but only one finished arrow-tip was found. This was procured from Mr. Miller who turned it up with the plow.

A few bone awls, more or less perfect, a number of tarsal bones of the deer and some portions of human skulls were found among the ashes.

From the same farm we procured through the kindness of Mr. James Lawson earlier in the season, a very fine mill or mortar. It weighs upwards of two hundred weight, and has four hollows worn deeply by grinding.

Although, so far, no ossuary has been discovered near this village site, it is certain that one exists not far away—probably in the woods close by, but a search made by us failed to locate the spot.

For many years an ossuary has been known on lot 12, con. 3, Vaughan, and once or twice superficial openings had been made in it. After leaving the village site we determined to examine this place thoroughly, with the consent of Mr. Keffer the proprietor which was kindly given. Mr. Keffer also did everything he could to facilitate the work while it was in progress.

We uncovered a portion of the surface, and reached the bones at a depth of three feet, but the presence of water compelled a stoppage for the day. As it was evident that our amateur digging would not enable us to master the difficulties, Dr. R. Orr kindly undertook to procure two professional spadesmen for the following day, when with the aid of a pump we were able to examine the contents thoroughly, as well as to ascertain the extent of the pit.

This ossuary presented a number of peculiar features which it may be well to note. Usually these communal graves occupy the highest knoll within easy reach of the village, and light, sandy soil was considered preferable, but in this case the ossuary is not on the most elevated point, and the soil consists of an exceedingly tenacious clay. Overlying the bones was a coating of light-colored "hard-pan" about three inches in thickness. This clay had evidently been employed to cover the bones uniformly, and probably the sides of the pit had been plastered with it also, thus accounting for the quantity of water we found it necessary to pump out.

Then, again there is considerable diversity in the type of skulls in this ossuary. Not only are there the long and short varieties, but many of them have an abnormally large occipital development.

As in other ossuaries, there did not appear to be any special arrangement of bones, except that here and there the skulls were placed in groups of half-a-dozen or more, but lying base up, crown up, or side up. Not a vestige of anything artificial was met with with. The diameter of the pit was fully twelve feet and Dr. R. Orr estimated the interments at not fewer than one thousand. We procured for our collection from this place (including a few presented by Dr. Orr) upwards of fifty skulls all more or less perfect. Should time and opportunity permit it is intended to give in next report the measurement of these, and of the other crania in the Museum.

NOTES.

BY DAVID BOYLE.

POTTERY.

In no department of " Primitive Industry " (to borrow the title of Dr. Abbott's interesting book) does our museum continue to afford so scanty a representation as in perfect specimens of aboriginal plastic art. We have accumulated a considerable quantity of fragments bearing a variety of patterns, but nothing like a whole vessel has been added to our collection since last report. The nearest approach was the small cup picked up by Dr. Orr, in York Tp., on the occasion referred to on a former page. This specimen, Fig. 1, is exceedingly plain. There is not the remotest attempt at ornamentation. Many of the sherds, however, found on the same site are lined and dotted in various ways. Other good specimens were procured from the farm of Mr. Thos. White, Nottawasaga, and from the Ridley and Bury property, Orford Township.

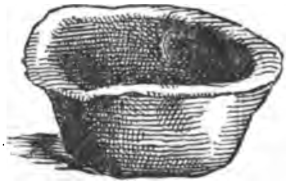


FIG. 1. (¼ Size).

Sometimes a certain pattern of ornamentation is found more frequently in a given locality than any other pattern. On the Murray farm, York Township, already mentioned, amid a variety of designs, that shown at Fig. 2 was the most common. A heavy band formed the upper portion of the vessel. This was scalloped or crenated on the lower edge. Near the upper and under edges of the collar parallel lines were drawn all round, and between these the pattern consisted of upright and diagonal lines.

Early in the season Mr. John McPherson, of this city, brought from his summer residence on Mindemoya Island, in a lake of the same name in the

Island of Manitoulin, a number of fragments that were remarkable for the fine quality of the material and the character of the ornamentation. These, when put together, revealed the shape and proportions of a vessel so handsome in form and so unique in design, that I have dignified it with the name of the Mindemoya Vase.

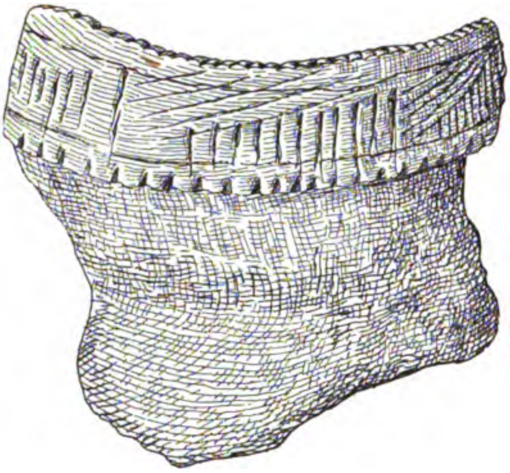


FIG. 2. (½ Size.)

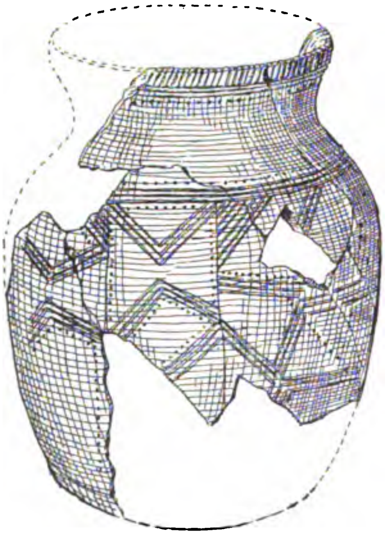


FIG. 3. Mindemoya Vase.

The surface has first been divided into sections by means of straight lines drawn from the upper part of the body to the base. Between these lines the design consists of triangular and lozenge-shaped figures chiefly bounded by three parallel lines. It is to be observed that these have not been made by any tool that would produce the desired effect at one draw, for, although in the main approximately equidistant, there is not the exactitude that would result from fixed teeth or projections having been employed. Each line has been drawn singly with considerable care and patience, just as have the two series that surround the neck, above and below.

Its measurement when perfect would be 5 in. dia. at the mouth, 7 in. at the widest part of the body, and about 9 in. in height.

The gracefulness of outline displayed in the Mindemoya Vase must appeal to the artistic conception of beauty. In this respect it is equal to the best specimens found anywhere else on this continent, and will compare, not unfavorably with the ancient vessels that have been unearthed in Europe and Asia Minor.

The grain of the fracture, though coarse, is still much finer than is ordinarily the case with Indian pottery, and the material thinner, harder, and more uniform in thickness than is usual. The surface is very smooth, and almost as true and as free from traces of manipulation as if it had been made on a wheel.

It is to be regretted that Mr. McPherson did not succeed in getting all the fragments of this peculiarly interesting vessel, but owing to the situation of the find, beneath the roots of a stump, there is still a probability that further careful search may bring the remainder of the pieces to light.

CLAY PIPES.

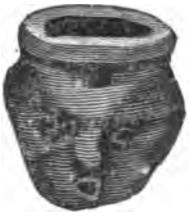


Fig. 4. (¾ Size.)

This quaint-looking pipe-head is from the township of Humberstone, where it was found by that intelligent collector and friend of the Institute, Cyrenius Bearss. In spirit and execution it is totally unlike any other specimen in our cases. The cheeks are broadened until they merge imperceptibly into large ears, the edges of which are united by means of four lines across the back of the head. The eyes are made by small depressions round which the clay forms an elevated ring or collar. The mouth is simply a small round hole somewhat larger than those of the eyes. The representation of lips has been neglected. The nose is prominent but damaged at the point. The eyebrows are sharply brought out. The outside diameter at the mouth of the bowl is one inch, and the total length of the specimen is one inch and a quarter.

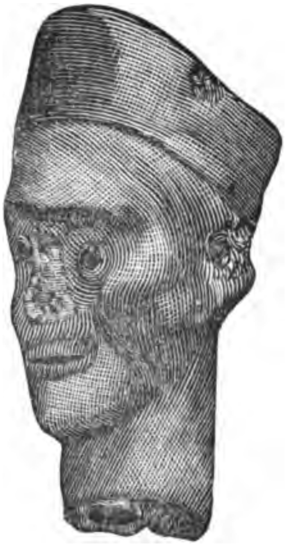


FIG. 5. (Full Size.

The finest specimen of handiwork found on the Clearville site last summer is here figured. Enough of the neck remains to indicate that the face looked towards the smoker. Unfortunately the nose is broken, and only the cutline of its extent on the face remains. Unlike Fig. 4, the eyes are simply holes, and pains have been taken to form lips. The eye-brows and cheeks are well modelled. The projections for ears are crude, and each is penetrated by a small hole. The band forming the head-dress is peculiar.

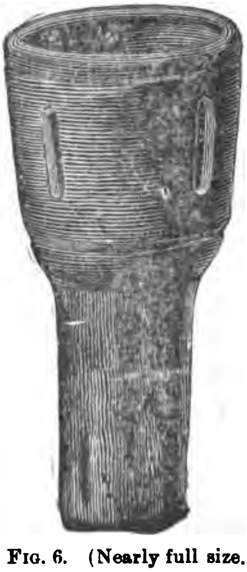


FIG. 6. (Nearly full size.)

In common with the greater number of our best clay pipes, that represented in Fig. 6 is from the Township of Nottawasaga. From the curve to the lips of the bowl this specimen is unusually long. The marking, too, is unlike the prevailing style. Two plain lines surround the upper portion of the bowl, and between these there are four pairs of upright lines, two of which (one each of two pairs) are shown in the engraving. The specimen is of a bright ochre tint, and does not appear even to have been in use. As is the case with a good many specimens that are found where they were made, it was probably broken in the process of burning. It was presented by Master David Melville.

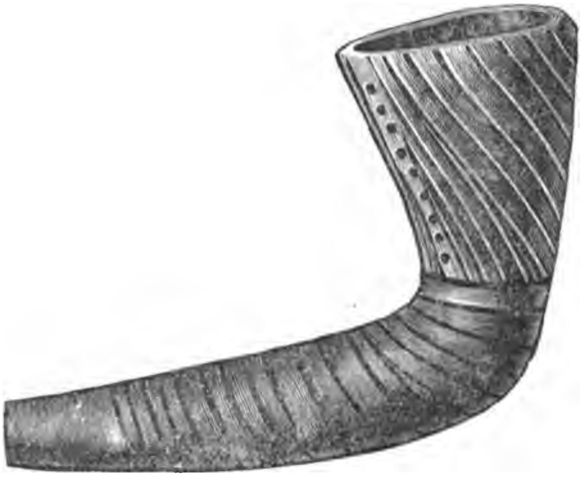


Fig. 7. (Nearly Full Size.)

In form and ornamentation this pipe is unlike any other in the museum. The bowl is capacious and the sides are thin. The lines and dots are quite different in order and arrangement from the normal patterns. It was found on an old village site near a branch of the Don on Bræside farm, Richmond Hill, and presented by Mr. David Boyle, sr.

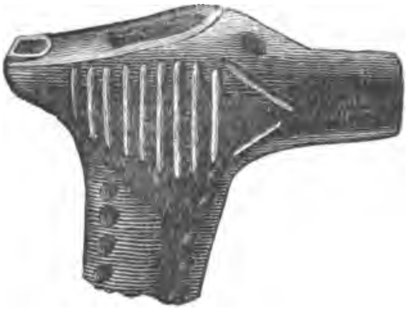


Fig. 8. (¾ Size.)

This pipe bowl is from the Lougheed farm, Nottawasaga. The engraving does not bring out all the details. The bowl hole should be shown as circular, and a deep cut marks the mouth almost meeting the two oblique lines beneath the eye. The nose should also be longer. As an imitation of some animal form, it is perhaps meant for a fox. The break is too near the head to enable one to say how the stem turned, but it was probably in the direction of the face.

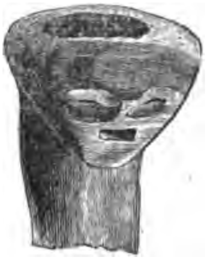


FIG. 9. (¾ Size).

The style of rude art shown in Fig. 9 is totally distinct from anything else in the museum. It is indescribable, and is not well brought out in the cut. When perfect the face must have looked down upon the stem at an angle of 30°. The face consists mainly of three cavities, containing mouth and eyes, which are deeply impressed at the bases. Viewed from underneath it has a laughing appearance. From the farm of Mr. Thos. White, Nottawasaga. Mr. Edward Coyle.

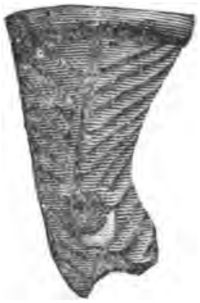


FIG. 10. (¾ Size.)

This pattern of pipe is unique, so far as I know. Although the hole is almost circular, the outline of the exterior at the mouth is oval, measuring from front to back 1¼ in. and from side to side 1½ in. One side is shown in the cut. An inch and a quarter from the lip the shorter diameter is still further compressed to ⅝ in., the measurement from side to side remaining the same. Longitudinally the head is divided by upright lines into four equal parts—one of them is shown above. These are connected by diagonals. Nottawasaga Tp. David Melville.

It is somewhat singular that although no other clay pipe of a similar shape had ever found its way into our collection, the finder of the specimen shown at Fig. 10 was fortunate enough to find the stem of what was evidently another pipe made after the same pattern. It was intended to give a figure showing the resemblance between the head figured and the stem here referred to, but as the engraving was not ready its presentation must be deferred. In the case of the stem the ornamentation has been, however, somewhat more elaborate than on the pipe head, for the lines are more numerous and more carefully made, and a series of dots on the lower side relieves the pattern. The toothed edges are neatly moulded.

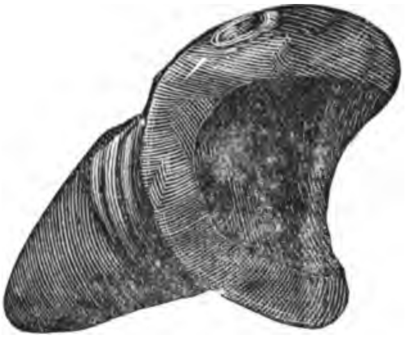


FIG. 11. (Full Size).

Although the original of Fig. 11 is imperfect, the cut does not do it justice. It is meant no doubt to represent the head of a snake, and is, in this respect somewhat like No. 90 in Case S. The jaws, however, are reversed in this specimen. Fig. 11 was found in the Nottawasaga, and was presented by Mr. Angus Buie.

STONE PIPES.

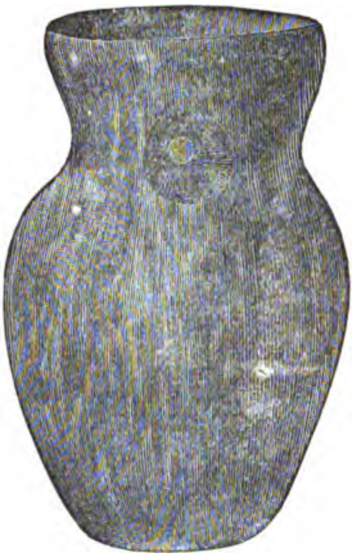


Fig. 12. (Nearly Full Size.)

Fig. 12 represents what is the heaviest if not the most elegant pipe in the collection. The material is a light grey, veined marble. Originally, no doubt, smooth, it is now very rough on the surface, looking as if it had been long exposed to the action of the weather. Notwithstanding the size of the specimen the bowl is remarkably small, as the hole (whose greatest diameter is only ¾ in. and narrows rapidly) is less than an inch and a quarter in depth. The wall of the bowl is from ⅜ in. to ½ in. in thickness. In cross section this pipe is somewhat oval, the longer diameter being at right angles to the stem hole.

It was found on Bræside Farm, near Richmond Hill, by Alexander and Arthur Boyle, children of the proprietor.

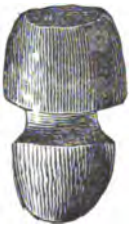


Fig. 13. (Nearly Full Size.)

The smallest stone pipe in the museum is illustrated at Fig. 13. It is well made and resembles in shape some that we have much larger. The stem-hole enters the lower triangular portion. This diminutive specimen is from the Qu'Appelle River Valley, N. W. T., and was presented by Mr. Jas. C. Stokes, Reeve of King Tp.

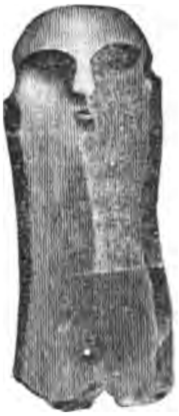


FIG. 14. (⅔ Size).

Fig. 14 is a somewhat rude attempt to imitate the human face, on a stone pipe bowl. The marks of the workman's tools are still apparent in this specimen. A first attempt to bore a hole at the base has proved a failure, and a second beginning has been made immediately above on the side shown in the cut. The stem hole enters below the middle on the opposite side. The bowl is thin, and is brought to a sharp edge at the lip. Hubert Conner, Nottawasaga.

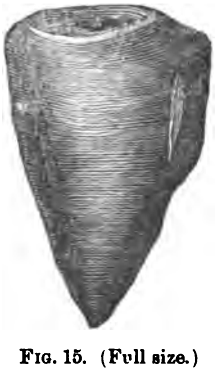


FIG. 15. (Full size.)

Fig. 15 illustrates an unusual attempt at variation in the form of stone pipe-heads. Apparently the design of the workman has not been completed, for the projecting portion on the upper half is a rough and unfinished representation of a human face. The stem hole enters from the opposite side. This specimen was procured from Mr. Ed. Coyle, Sunnidale, but it was picked up from the village site on the farm of Mr. Thomas White, Nottawasaga.

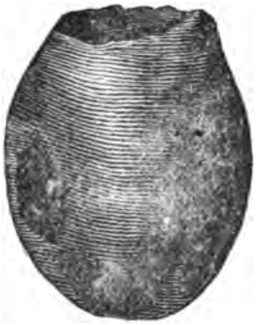


Fig. 16. (½ Size.)

Fig. 16 must have been wheu perfect a beautiful piece of aboriginal handicraft. It is made of serpentine, and contains large crystals of iron pyrites which have been carefully rubbed down uniformly with the body of the material. Fig. 16 is given here chiefly on account of its having two stem-holes. This pipe was found on the farm of Mr. Duff, Nottawasaga, and was by him presented to the museum.

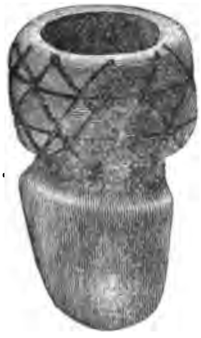


Fig. 17. (Full Size.)

This very handsome stone pipe was presented by Wardie and Ottie White. It was found at Lambton Mills, York Tp. It is nearly perfect in every respect. The material is a fine, light brown sandstone. The stem-hole is bored immediately below the central grove, on the right hand side of the engraving.

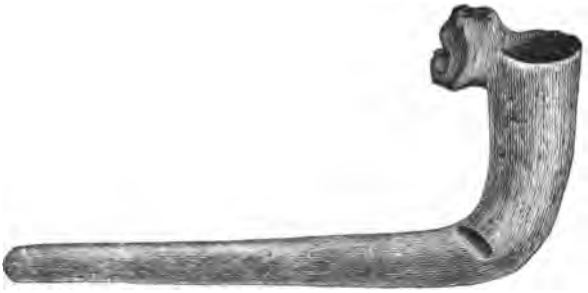


FIG. 18. (½ Size.)

Specimens of the "white stone" pipe are rare in Ontario. Fig. 18 illustrates one of two in the museum. It is 5½ in. long, considerably weathered, and has what appears to be the head of a bear or dog on the inner edge of the bowl. This pipe was found on the Lotteridge farm, near Hamilton, a spot from which large numbers of valuable relics have been procured.

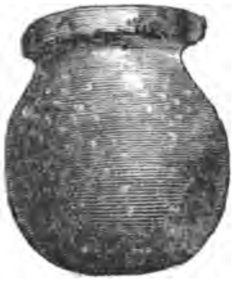


FIG. 19. (Full Size).

To Mr. Dugald Currie, teacher, Creemore, we owe the pipe here figured. It is very well made, the chief defect in its form being in the flared tip, where, no doubt owing to a want in the material on one side the prominence is less than elsewhere. Two parallel lines (not shown) surround the bowl, which in cross sections is rather oval than circular. A hole for suspension has been bored through the bottom, below the stem hole on the left side of the illustration. The material of this pipe is steatite

BONE AND HORN.

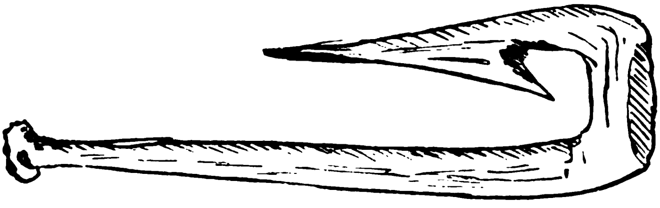


FIG. 20. (Full Size.)

Fig. 20 is a somewhat rare form of relic in anything like a perfect condition, and even fragments are not common. This specimen formed part of the collection presented to the museum by Mr. James Dickson, of Fenelon Falls, and was found in the county of Victoria. The form is extremely suggestive of Eskimo influence or contact, and some force is added to this conjecture from the fact that we have a small walrus tusk found in the same locality.

This specimen, in any event, must be classed among those of comparatively recent date.

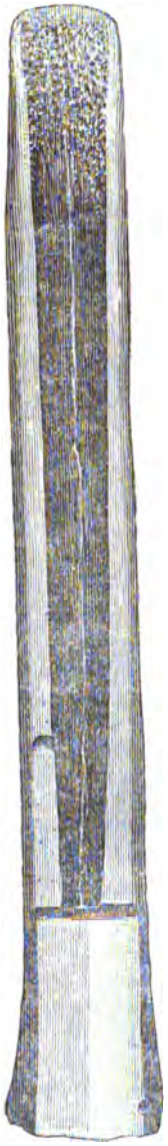


FIG. 21.

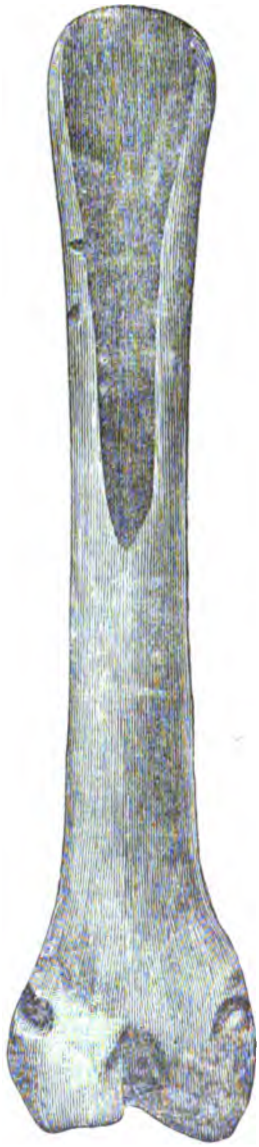


FIG. 22.

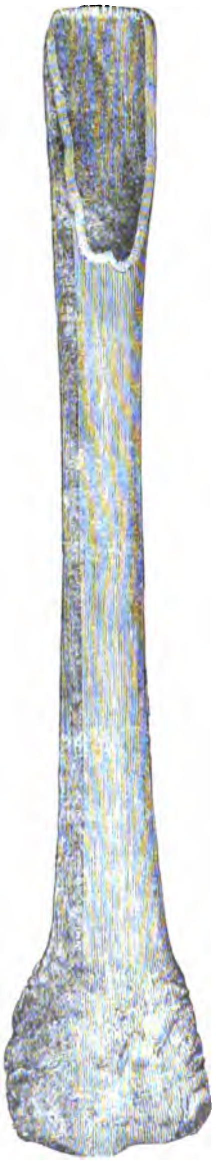


FIG. 23.

The specimen here figured (21) is an exceedingly handsome one, and measures 11¾ inches in length. The bone of which it is formed is almost square in cross section, and the workmanship is so well done as almost to lead one to the conclusion that steel tools must have been used in reducing the material to its present shape. The side shown in the engraving has been neatly shouldered down near the head where the bone is an inch and a quarter thick, and has been made to taper until a good cutting edge is formed at the opposite end.

This tool was found on the farm of Mr. Thomas White, Nottawasaga.

Within a few miles of the same place another similar implement was found on the farm of Mr. Melville, by whose son it was presented to the museum. It is shown at Fig. 22. In this case the workmanship is not so good, although the specimen is equally interesting. The bone, in cross section, is oval, and no pains have been taken to modify the knuckle or joint processes that form the head. No attempt has been made to form a shoulder as in Fig. 21, as the upper side shown has been ground in a uniform line to produce an edge at the mouth. It is somewhat shorter than Fig. 21, measuring only 11¼ in.

Some light was thrown on the probable use of these implements, by Messrs. Ah-yan-dwa-wa and Mah-shuck-a-wa-we-tong, two Indians from St. Francis' Reserve, Manitoba, who visited the museum during the fall. They stated that similar tools are still in use among the tribes in the North-west for the purpose of skinning or of dressing skins, and these gentlemen promised to send us specimens of those that are thus employed.

Since that we have been presented by Major J. M. Delamere of this city, with one of the North-west specimens, which is represented at Fig. 23. Like Fig. 21 its cross section has been ground square, and like Fig. 22 the original joint formation at the head is left intact—indeed a good deal of cartilage is still adherent to that end. It differs, however, from both of these at the mouth, where a number of shallow notches have been worked on both sides lengthwise giving the cutting edge a serrated appearance. For scraping purposes this device would prove serviceable. Major Delamere's specimen was procured from near Battleford. It is 14¼ in. long, and at the thickest part of the squared portion measures 1¼ in. The taper extends only 4¾ in. from the lip.

Among a number of articles recently presented by William and David Melville is a small tool, somewhat imperfect, of the same type as these.

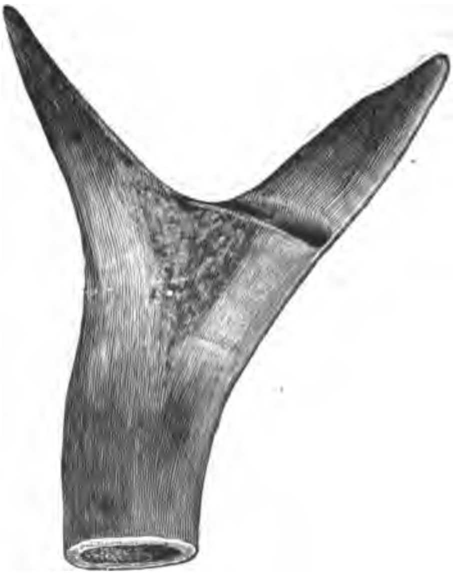


Fig. 24. (¾ Size.)

Fig. 24 represents a forked deer-horn prong, the marks upon which tell their own tale. The abraded hollow as seen in the cut on one branch has a corresponding depression on the opposite side of the other. It seems evident, therefore to have been held in the hand by the squarely cut end, and to have been used for rounding or smoothing thongs and sinews in a state of tension as the material passed over one part and under the other while the tool was moved briskly backwards and forwards. It is from Humberstone Tp., and was presented by Mr. Cyrenius Bearss.

FIG. 25.

Fig. 25 is a piece of bone 2¾ in. long, and ⅞ in. at its greatest diameter. A deep hollow runs along the side shown in the engraving. From edge to edge of this hollow, round the opposite side fourteen lines are deeply cut diagonally, the seven from the one side crossing those from the other and forming a lozenge pattern. The bone is cut smoothly and squarely off at both ends and has a semi-lunar hole through it. Lambton Mills. Wardie and Ottie White, Toronto.

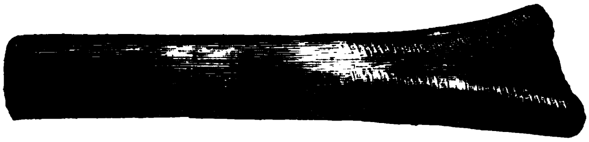


FIG. 26. (⅔ size.)

A few bones similar to Fig. 26 are labelled in our cases as "Tally" or "Record" bones. The fact that these are notched slightly, crosswise, in one or more rows, naturally suggests keeping count of something; scalps, captives, number of men in a band, days' travel, etc. Having counted the notches on all the specimens of this kind (about half a dozen) in our possession, it was interesting to note that none exceded twenty-nine or thirty, that one had two rows of fourteens, and that another was arranged in sevens, the total amounting to twenty-eight.

In Fig. 26 there are two rows of notches, twenty-eight in each row. These are delicately cut along the crowns of the two ridges that extend from the cylindrical body of the bone to the joint. As reckoning time wholly by "moons" was common to the Indians with the uncivilized of all countries, the maximum of marks on these bones might lead one to regard such specimens as simple calendars, or, perhaps, rather as mnemonic aids relating to days past. On the latter supposition, we should not, of course, expect to find the groups of markings exceed twenty-eight or twenty-nine, and any less number could be easily accounted for.

With so small a number of specimens to compare, it would be rash to write with assurance on this point, but it is to be desired that those who have "Tally" bones will examine them carefully, and inform us of the result. It is needless to say that we will be glad to receive specimens that tend either to confirm or to disprove the view suggested.

Fig 26 is a very fine specimen, squarely cut at one end, and exceedingly smooth. Near the ridged and marked end it is stained green owing to contact with copper. I found it along with some native copper beads in Tremont Park, Tidd's Island.

FLINT.

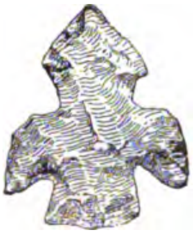


Fig. 27. (¾ Size.)

The specimen figured here is of an unusual tpye. Our collection of "flints" is large, but this is the only one of its kind we have. It is from the Miami Valley, Indiana, and formed part of the collection of Mr. C. J. B. Ratjen, of Lawrenceburg.

STONE TUBES.

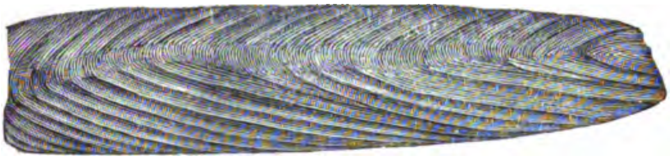


Fig. 28.

Our collection of these mysterious objects has received some valuable additions since the issue of last report. Two very fine specimens came from Wolfe Island, the largest of which measures 8½ in. in length.

Fig. 28 is 4¾ in. long. The hole is not quite round and corresponds in size with the outside measurement of the stone. Lengthwise, on the opposite side from that shown above there is a shallow groove. The material is stripped slate. This specimen was presented by Mr. Wm. Michener, one of the oldest and most highly respected surviving settlers in the Township of Humberstone.

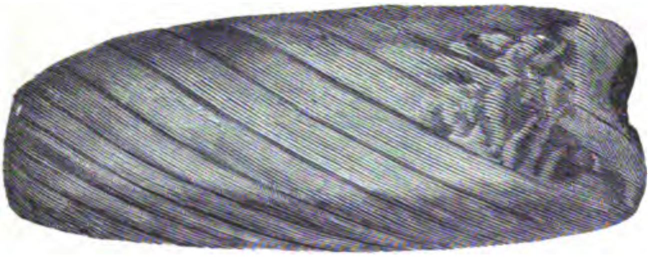


Fig. 29. (½ Size).

Fig. 29 is of the same material as Fig. 28, and is evidently an unfinished tube. A hole about ¾ in. in dia. has been bored to a depth of 1⅜ in. at the larger end. Found on farm of Mr. W. H. Johnston, Township of West Williams.

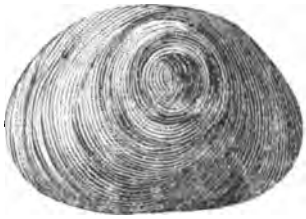


FIG. 30. (Nearly Full Size.)

This really fine specimen appears to be unfinished, as it was likely the intention to bore it perpendicularly. It is of striped slate, well made (better than the engraving) and was found near the village of Burford.

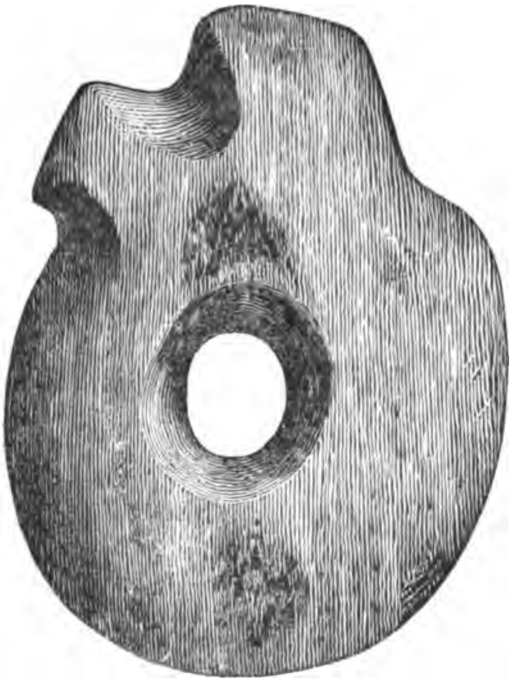


FIG. 31.

The specimen represented here is one of the puzzles. But for its great size, 5¾ in. long and 4 in. wide, it might be taken for an intended pipe-head of the

McCallum type found near Milton, figured in our report for 1886-7. The material is a close grained, dingy blue argillite, and is 1⅝ in. thick. The hole in the middle is counter-sunk on both sides, and some pecking has been done on each side both above and below this hole, either with the intention of enlarging it, or of producing others. Whatever the ultimate intention may have been, the work is evidently incomplete, but is none the less interesting on that account.

This, along with some other fine specimens was presented to the museum by Mr. Angus Buie, of Nottawasaga.

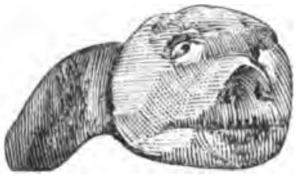


FIG. 32. (Full Size).

The curious nondescript specimen here figured is from Nottawasaga. It is made of white marble, and has a strong resemblance to the head of a bull-dog. Owing to mistake on the part of the engraver, there should be a shoulder and short leg shown behind the neck. Originally the specimen was probably full length as the lower end presents a rough surface as if a piece had been broken off. From Mr. John Hannah, teacher, Duntroon.

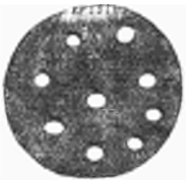


FIG. 33. (Full size.)

Fig. 33 is of brown argillite, less than ⅛ of an in. in thickness. It seems to have been worn as a pendant; perhaps, as a part of a string of beads. One hole near the margin is larger than the others and shows signs of wear. It is unique so far as our collection is concerned, and not common anywhere. Lougheed farm, Nottawasaga.

MILLS OR MORTARS.

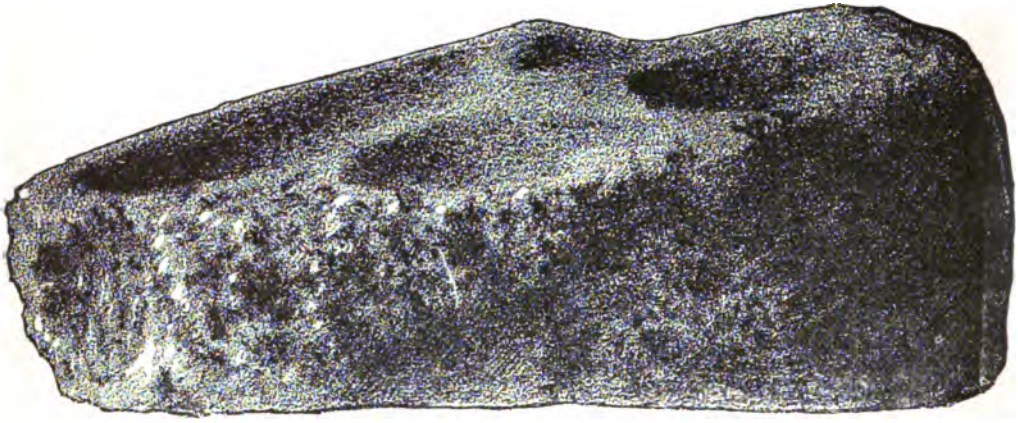


FIG. 34.

Although our collection of mills or mortars is not an extensive one we have been successful in procuring a few very good specimens. The largest and best is from the township of York, within a few miles of Toronto. It is 2 ft. 9 in. long; 1 ft. 7 in. at the widest, and 8 in. thick. The stone is of gneiss, hard, and of a light pink color. At the larger end a hollow has been formed, 16 inches long, 10 in. wide, and 1½ in. deep. Near the middle of the length, but to one side, there is another and almost circular hollow, the greatest diameter of which is 10½ in., and the depth 1 in. At the smaller end of the stone, which rounds off to less than a foot across, there is a third hollow whose longest diameter is 9 in., and the shortest 8 in. The depth of this one is only about ¾ in. On the opposite side to the second hollow mentioned, is a fourth hollow, occupying all the remaining available space. It is only half round, being worn out to the margin of the stone, which has here a straight face.

This must have proved an excellent stone for grinding purposes as the gneissoid laminations have broken off sharply in the course of rubbing, thus presenting a series of angular edges along the sloping sides of the hollows that no doubt facilitated very much the bruising process as applied to seeds, nuts or roots. The weight of this specimen cannot be less than two hundred pounds.

In many parts of the world stones have been found indicative of bruising by means of pounding, and some of those met with in this country may have been so used, but all the specimens we have, appear from the character of the hollowed portion to have been subjected to a circular, grinding motion. This was manifestly so with the large stone in question. It is large enough to permit of at least three persons grinding at the same time. The continued use of such a heavy, and consequently unportable stone, points to a considerable permanency of *habitat*, or else frequent return of people at intervals to the same locality.

The upper, or hand stone, was usually a somewhat flattened and rounded piece of primitive rock weighing from three to six pounds. Long and artificially formed pestles are of comparatively rare occurrence in Ontario, and those that have been discovered are, as a rule, exceedingly plain, differing in this respect from many that are found in more southerly districts.

COPPER.

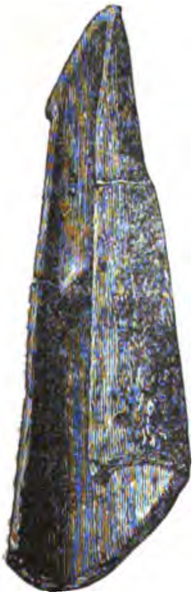


Fig. 35. (½ Size.)

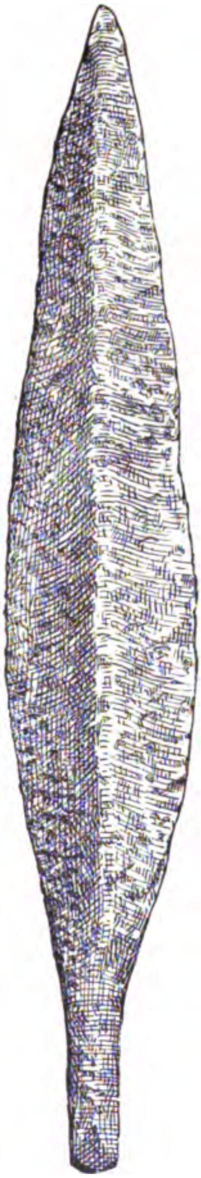


Fig. 36. (Full size.)

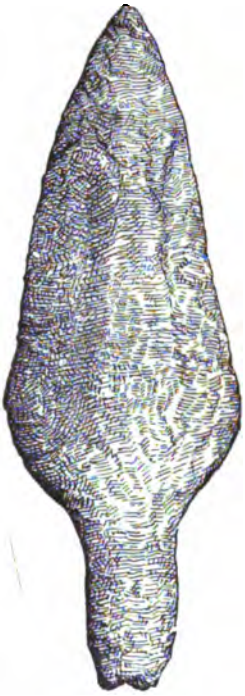


Fig. 37. (Full Size.)

The Fig. 35 represents a remarkably fine specimen of native copper implement found on the north bank of the River Kaministiquia, near Fort William, and was presented to the museum by Capt. J. S. Smith, of Fort William, along with a spike or spear of the same material, about one foot long, from the same locality. The edges forming the handle socket are just turned over enough to give a good grip, and the cutting end has been worked to as keen an edge as it is possible for copper to take.* This is in many respects the best specimen of native copper implement in our cases.

Although our collection of native copper relics is comparatively small, its extent is already much greater than we anticipated making it when we began to form cabinets. Neither is it to be expected that we shall ever possess objects of this material in such profusion as those of stone or bone. It is not quite easy to account for the scarcity of native copper tools. Distance from source of supply is not enough. Indeed, it seems probable that for most purposes the implement of hornstone or chert was in nearly every way more serviceable than that of the virgin metal. However this may be, copper has not, at any rate, entered so largely into aboriginal economy in this part of the country, as has shell of a species that had to be brought from even a greater distance in an opposite direction, and offering fewer facilities for travel.

Fig. 36 is a good example of the spear or lance head. It was found in the valley of the Ottawa, and has with other objects been placed in our keeping by Dr. T. W. Beeman, of Perth.

Another weapon of this material is illustrated here, Fig. 37. It was found near Lakeside and was presented by Mr. Sparham Sheldrake of that village. Like nearly all such objects it has a rough surface as the result of weathering, and this roughness is shown in short and crooked ribs running longitudinally. Had the metal ever been smelted no such effect would have been produced from weathering, because the metal would then be homogeneous throughout; but in its native condition small portions here and there are harder than the rest, and the effect of hammering into shape is to elongate these. In consequence of their greater hardness these parts withstand the action incident to decay better than the other portion and are thus left standing above the general surface. It is mainly on account of such ridges that so many persons, writers and others, have concluded that the implements or weapons were cast in a mould.

---

*It may be remarked here that the commonly accepted belief with regard to tempering of copper tools by the Indians is a fallacy. If they have any unusual hardness it is merely the result of cold hammering.

CRANIA.

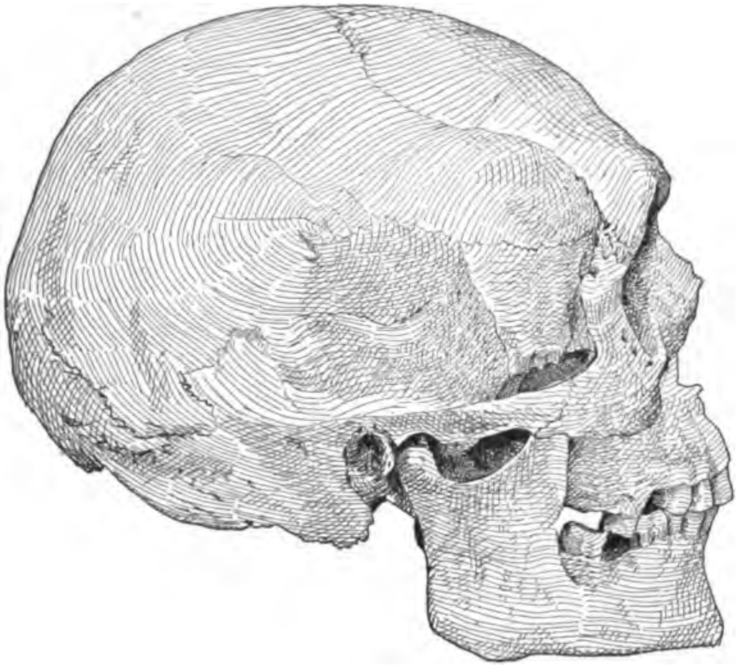


FIG. 38.

This figure represents one of eight skulls taken from within the ancient enclosed village site on the Ridley and Bury farm, Clearville, The measurement of these and other skulls will probably be given in next report; meanwhile the contour of figure 38 is worthy of study. The frontal recession is particularly noticeable.

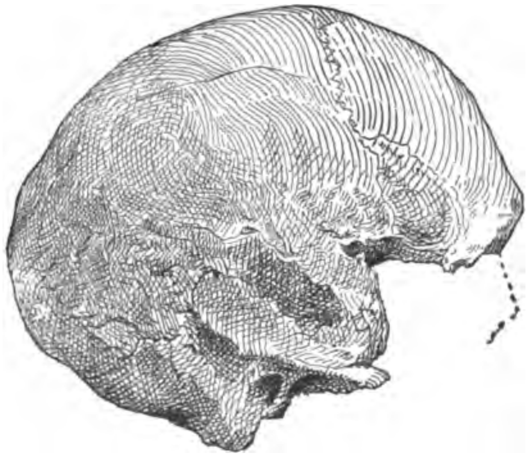


FIG. 39.

Among the large number of interesting skulls from the Keffer ossuary in Vaughan township, a good many are remarkable for their occipital development, as in Fig. 39.

MODERN INDIAN DRESS, ETC.

It is perhaps almost as desirable that we should preserve specimens of the present day of aborigines' workmanship as well as those of a bygone time. While it is true that the Indian as we know him has lost the art of producing stone weapons and tools, he (and we should say also she) exists in the manufacture of a few simple articles including chip baskets, snow-shoes, and various objects ornamented with bead-work. In the production of these, the women, especially, show considerable taste, and the exercise of much patience.

Beads were valued highly among them even in their primitive condition when stone, shell and bone were their only available materials, and the introduction of the colored glass article proved so attractive that the ancient wampum was discarded at a very early date even in the making of treaty belts. All the belts of this description now held by Fire-keeper, John Buck, for the Six Nation Indians on the Tuscarora Reserve, are composed of European material, as glass, or of other material shaped by European skill, as shell.

We are indebted to the Rev. John McLean, now of Moosejaw, N.W.T., for a number of modern specimens illustrative not only of the skill, but of the manners and customs of the Blood Indians among whom he spent many years of enthusiastic labor, and regarding whom he has written an extremely interesting volume, besides numerous papers that have been read before the Canadian Institute, and some that have appeared in the publications of the Smithsonian Institution.

A list of the specimens presented by Mr. McLean and others will be found in the catalogue accompaning this report.

FRENCH RELICS FROM VILLAGE SITES OF THE HURONS.

THE GEOGRAPHICAL DISTRIBUTION OF THESE RELICS IN THE COUNTIES OF SIMCOE, YORK, AND ONTARIO.

By A. F. Hunter, B.A.

The French traders of the seventeenth century brought amongst the Huron Indians of Ontario large quantities of articles of European manufacture in exchange for the Indians' furs. The metal portions of these articles are found in abundance at the present day in those parts of the province inhabited by the Hurons at that time.

The most abundant relic of this kind is the iron tomahawk, thousands of which have been found in various parts of the province, but more especially in North Simcoe, and at the west end of Lake Ontario, where the Neuters dwelt. These tomahawks are of various sizes, but almost all of the same well-known shape, each bearing three crosses in relief on one side; their appearance is, however, too well known to require a description.

Copper and brass kettles are also numerous, and are almost invariably found in the ossuaries. In nine cases out of ten these kettles, which were formed of sheet metal, were rendered useless by blows from a tomahawk upon the bases of the vessels. This practice of rendering useless every article deposited with the dead was, however, common to many tribes, the apparent object being to remove any temptation to desecrate the graves.

Besides tomahawks and kettles, there are iron knives, earthen and glass beads, copper bracelets and ear ornaments, and many other articles. The various kinds of French relics are well represented in the Museum of the Canadian Institute, where they can be minutely examined at any time, so that they do not require further notice here. We shall now proceed to the special subject of this paper—the geographical distribution of these relics over the Hurontario isthmus. The analysis by townships of the Huron village sites and ossuaries in the three counties of Simcoe, York and Ontario, which is given in the table accompanying this paper, shows certain evident facts regarding the geographical distribution of French relics. The information supplied by this table has been obtained from catalogues opened by the writer for each of the counties mentioned, in which details of each village site, ossuary, etc., have been collected and recorded. A majority of the sites were personally visited.

The Huron custom of settling in village communities and remaining for a considerable time, makes it an easy task to recognize the remains of one of their villages. These are indicated by abundant accumulations of charred soil and ashes, broken relics, etc.; complete relics are, unfortunately, becoming rare. In preparing these catalogues, therefore, although many sites were visited, it was almost impossible to obtain any relics. In most cases, accordingly, all that the writer could do was to make notes of what relics had been found in past years from as many reliable sources as possible. It occasionally happened that the very fact of the former existence of a village or ossuary had almost passed from the recollection of the present inhabitants of the district.

Up to the present time the writer has made a record of the following Huron sites :—

Villages	Simcoe	218	York	33	Ontario	14
Ossuaries	"	122	"	5	"	6

[These figures do not include a considerable number of Algonquin village sites and burial grounds, which have also been recorded; they apply altogether to the sites once occupied by Hurons.]

They do not indicate the absolute number of village sites and ossuaries in each county, nor are they any index of the relative numbers of sites which may subsequently be found to exist. They merely indicate the numbers recorded so far in each county according to our opportunities for making enquiries. They are, however, sufficiently representative to enable us to arrive at certain important conclusions respecting the geographical distribution of French relics.

Many persons have contributed valuable facts towards the preparation of the catalogues mentioned, for which the writer is under obligations to them; and it would be a long task to give the names of all those to whom credit is due. It will be sufficient for the present to say that the name of every person who became authority for a statement regarding any site, has been recorded in its descriptive account of the catalogues.

Further investigation may modify to some extent the statistics furnished here; but a degree of confidence may be placed upon the general relations indicated by the table:—

TABLE SHOWING THE GEOGRAPHICAL DISTRIBUTION OF FRENCH RELICS IN THE COUNTIES OF SIMCOE, YORK, AND ONTARIO.

TOWNSHIP.	VILLAGE SITES.			OSSUARIES.		
	In Catalogues.	Post-French.	Percentage.	In Catalogues.	Post-French.	Percentage.
Simcoe County:						
Nottawasaga....	32	11	35	41	11	27
Tiny...........	27	14	51	19	8	42
Tay............	16	12	75	18	9	50
Medonte.......	41	33	80	19	14	74
S. Orillia.......	6	4	66	2	1	50
Oro............	23	8	35	9	5	55
Vespra.........	19	5	27	2	1	50
Flos............	12	2	16	4	1	25
Innisfil.........	30	5	17	3	....	....
W.Gwillimbury.	5	1	20	2	....	....
Tecumseth.....	7	1	14	3	....	....
York County:						
E. Gwillimbury.	4	....	....	....	....	....
King..........	2	....	....	....	....	....
Whitchurch....	6	....	....	2	....	....
Vaughan.......	3	....	....	1	....	....
Markham......	3	....	....	2	....	....
York...........	13	1	8	....	....	....
Scarboro'.......	2	....	....	....	....	....
Ontario County:						
Scott..........	3	....	....	2	....	....
Uxbridge.......	1	....	....	....	....	....
Reach..........	6	1	16	2	....	....
Pickering......	3	....	....	1	....	....
Whitby........	1	....	....	1	....	....
Totals........	265	....	....	133	....	....

The first column of the table gives the townships. In the second is given the number of village sites so far recorded in each township. The third contains the number of village sites at which French relics have been found, and the relative percentage which these bear to the whole number recorded is carried out into the fourth. This is done for the purpose of comparing one township with another. The fifth, sixth, and seventh contain similar statistics relating to the ossuaries.

The townships are arranged in the table, beginning at Georgian Bay and descending southwards. Bearing this fact in mind and glancing down the fourth column, it will be observed how rapidly the percentage of villages where French relics have been found falls off after leaving the first few townships in the remote north beside Georgian Bay. This was the district occupied by the Hurons in the time of the Jesuit missionaries of the seventeenth century. If we draw a line from east to west through Kempenfeldt Bay on Lake Simcoe, it will be seen that of all villages south of this line less than twenty per cent. have yielded French relics. The difference in the geographical distribution of these relics on the two sides of this line is made apparent by contrasting one representative township from each part, say Medonte and Innisfil. In Medonte 41 village sites have been entered in the catalogue, of which no less than 33 (or 80 per cent of them) have yielded French relics ; while of 30 village sites in Innisfil, only 5 (or 17 per cent.) have yielded French relics, and merely one or two isolated tomahawks in most of these five cases. There is a wide difference here—viz., between 80 per cent. and 17 per cent., and this difference of geographical distribution can only be accounted for by supposing that the larger part of the villages of Innisfil, as well as of the others south of the line just drawn, were occupied by the Hurons before the arrival of the French traders. In York and Ontario counties there is but one case in each, so far as the writer has ascertained, of European relics having been found at Huron village sites, and in neither of these cases is the evidence very conclusive. Many European relics have been found at Algonquin sites in these two counties, and the two cases in question may be of relics lost by later Mississagas on the ground previously occupied by the Huron lodges.

Independent evidence of a similar character is furnished by the ossuaries. There is no proof of any French relics having been found in the ossuaries south of the line through Kempenfeldt Bay, that is in South Simcoe, York, and Ontario. But in North Simcoe the percentage runs as high as 74.

This classification affords us a means of arriving approximately at the date of Huron occupation of these parts of Central Ontario under consideration. The beginning of French intercourse with the Hurons may be said to have taken place in 1615, when Champlain made his celebrated journey to their country. From that year onwards traffic between the French and Hurons was established. So that speaking in a general way, this date, 1615, is the dividing line between post-French and ante-French villages. Wherever French relics are found, in most cases it may be concluded that the village dates after 1615. The table therefore shows that the sites in N. Simcoe, near Georgian Bay, were mostly post-French, while the more southerly ones—those in S. Simcoe, York and Ontario—were chiefly ante-French.

The former statement might readily have been inferred from our historical data of the first half of the seventeenth century, without the assistance of archæology ; but, little of an historical nature has been known with regard to the numerous Huron sites of S. Simcoe, York and Ontario. It would appear from the table that they chiefly belong to a period preceding the sites of N. Simcoe.

There are references in the early French writers to an increase of population in the Huron tract (now North Simcoe) from which we may infer that what might be called a migration took place. Champlain and Le Caron in 1615 reckoned 17 or 18 villages in the Huron peninsula, with 10,000 persons. Brebeuf, in 1635—20 years later—found 20 villages, and about 30,000 souls. [Relations (Canadian edition), 1635, p. 33; 1636, p. 138.] Here is evidence of a rapid influx from some quarter into the sheltered peninsula of N. Simcoe, between the years 1615 and 1635.

The aborigines of any country are always found at the corner opposite to the point of entry of their invaders This was the case with the early Celts of Britain, the Lapps of North Europe, the Basques of Southern France, and indeed with every race of conquered people known to history. It might therefore be expected that the Hurons would remove as far as possible from their enemies, the Iroquois; and it was in this position—against the northerly limit of land adapted to agricultural pursuits—that they were found by the early French.

These inferences from historical considerations have been fully confirmed by the table of sites given, from which it is evident that a removal from the sites of Ontario, York and S. Simcoe took place about the time the French first came.

In conclusion, it may be stated that there is another important feature of the N. Simcoe sites, not indicated in the table, and which though highly important, will be merely alluded to in this paper. The largest Huron village sites in the country are found there, and they are likewise post-French. It would appear from this that as danger from the invading Iroquois grew greater. the population became amassed into larger villages for safety.

CATALOGUE OF SPECIMENS

IN THE

PROVINCIAL ARCHÆOLOGICAL MUSEUM.

The follwing list does not comprise all that is in the cases of the museum. Many pages would be required, merely to mention the names of donors and localities connected with hundreds of stone axes, " flints," and other comparatively common types of relics.

Neither are the arrangement and classification to be regarded as satisfactory or final. Museums, like libraries of humble origin, require frequent changes and re-arrangements corresponding to the increase and variety of the collections. This is especially so when, as with us, the growth is remarkably rapid, and the space at disposal limited. From almost absolutely nothing four years ago, what follows will give some idea of the success that has attended the efforts of the Canadian Institute to form an archæological collection in some degree worthy of the province.

It is hoped that the example set by so many persons whose names appear in this list as those of donors will be emulated by others, who may have in their possession single specimens or small collections, and that these objects may be presented to us for safe keeping.

S. stands for Mr. J. W. Stewart and M. for Mr. W. Matheson, from whom we purchased small collections, and Y. P. col. stands for York Pioneers' collection.

DAVID BOYLE,
Curator..

CASE A.

PARTLY OR WHOLLY OF EUROPEAN MANUFACTURE, BUT FOUND IN FIELDS AND OSSUARIES.

1. Quantity of small red glass beads. Beverly Tp. Jas. Dwyer.

2. Quantity of small blue and purple glass beads. Beverly Tp. Jas. Dwyer.

3. String of glass beads. Baby Farm,* York Tp. Miss Kirkwood.

4. String of very small red glass beads. York Tp. Y. P. col.

5. Four blue glass beads. Humberstone Tp. Cyrenius Bearss.

6. Two blue and one red glass bead (all square in cross section). Brantford. S.

7. String of glass beads, various colors, with stone pendant. Beverly Tp. Dwyer, col.

8. String of long red glass beads. No locality. Y. P. col.

9. String of glass, shell and stone beads. Y. P. col.

10. String of long blue glass beads. York Tp. Y. P. col.

11. Quantity of long and spherical glass beads, red and blue. Beverly Tp. Dwyer col.

12. Thirteen glass beads from ¼ in. to 1½ in. long, variegated red and blue. Lake Medad. Y. P. col.

13. Two oval glass beads. Beverly. Dwyer col.

14. Quantity of blue and red glass beads, various sizes and forms. Nottawasaga. G. Lougheed.

15. Three long, pale blue, glass beads (cross section square). Beverly. Dwyer, col.

16. Three red glass beads. Norwich Tp. S.

17. Quantity of small glass beads, various colors. Beverly Tp. Dwyer col.

18. One cylindrical variegated glass bead, 1 in. long and ½ in. diameter. Nottawasaga. Lougheed col.

19. String of red and blue (mainly round) glass beads, with small Catholic medallion. Baby Farm. J. Kirkwood, Toronto.

20. Brass brooch plate. Mindemoya Island, Manitoulin. John McPherson, Toronto.

21. Silver brooch plate. Brant Co. S.

22. Silver medal (temp. George III.). The body of the medal is thin but has the bust of the youthful king ob. and royal arms rev. in strong relief. Y. P. col.

23. Brass belt medal, 2½ in. diameter. Beverly Tp. Dwyer col.

24. Iron bracelet. Beverly Tp. Dwyer col.

25. Large brass finger-ring. Baby Farm. Y. P. col.

26. Rude copper medal apparently made from fragment of some copper vessel. Baby Farm. Y. P. col.

27. Small ring-brooch and pin. Baby Farm. Y. P. col.

---

*Pronounced *Bawby*. The Baby family was intimately associated with the early history of Detroit.

28. Small brass seal finger-ring. On the seal is the letter L enclosing a heart. Baby Farm. Miss Kirkwood.

29. Brass seal finger-ring. On seal are engraved I. H. S., with a cross standing on the bar of the H. This ring was presented in a neat box of porcupine quill work. Ossossané., Simcoe Co., Rev. Father Laboureau. Penetanguishene.

30. Silver ornament—circular, 2⅜ in. diameter. Consists of a narrow, flat rim, ⅛ in. across, enclosing a six-pointed star, in the centre of which is a circle ⅞ in. diameter, outside measurement. The whole of the pattern is of the same dimensions as the rim. The star and inner circle are slightly relieved with double-dotted lining on both sides. No locality. Y. P. col.

31. Copper coil nearly 1 in. in diameter. This seems to have been made of round wire which was beaten flat after being coiled. Baby Farm. Jas. Kirkwood.

32. Brass belt-buckle, oval, 3½ in. long by 2⅜ in. wide. Found near Toronto, Wm. Townsend.

33. Quantity of glass beads in considerable variety. Parkdale. J. R. Wismer, Parkdale.

34. Two large beads, one blue, one white. Near Toronto. Y. P. col.

35. Rudely formed ear of large copper kettle. It is made of several thicknesses of sheet copper folded. Beverly. Dwyer col.

36. Sheet copper coiled to form a rough tube and bent like L. Baby Farm. J. Kirkwood.

37. Sheet copper, fragment of kettle bottom. Shows hammer marks. Beverly. Dwyer col.

38. Four fragments of sheet copper from kettles. Baby Farm. Miss Kirkwood.

39. Twelve pieces sheet copper. Five of them triangular and perforated near the middle, Five are coiled conically. Beverly. Dwyer col.

40. Several fragments of copper kettles. Beverly. Jas. Rae.

41. Two fragments copper kettles. F. A. Benson, Port Hope.

42. Brass vessel 6 in. diameter and 2¾ in. deep, with ears. No record.

43. Lead ingot and conical bullet. Baby Farm. J. Kirkwood.

44. Lead smoking pipe. Scotland Village, Brant Co. S.

45. Piece of sheet copper 7 in. long and 2¼ at widest. Said to have been over two feet long when found along with other relics. Jas. Dickson, Fenelon Falls.

46. Sheet copper needle (?) 2⅞ in. long, barely ¼ in. wide at head where it is broken apparently about midway through a long eye, ¼ in. of which remains. Nottawasaga. Lougheed col.

47. Iron pipe-tomahawk. Pipe head broken off. Blade has floral design engraved on each side. Some lines are also cut on the sides of the eye. Vardy Lake, Addington Co. Dr. T. W. Beeman, Perth.

48. Part of gun-lock. Baby Farm. Miss Kirkwood.

49. Fire or tinder steel. Y. P., col.

50. Gun flint. Baby Farm. Miss Kirkwood.

51. Six gun flints. Baby Farm. J. Kirkwood.

52. Part of white clay pipe stem on which are stamped two lozenge-shaped figures, quartered, each quarter containing a *fleur de lis.* Baby Farm. J. Kirkwood.

53. Iron pipe tomakawk, complete, with perforated handle. No record. Y. P. col.

54. Iron nodule containing pyrites. Found with some Indian relics in Huron Tp. William Welsh, Amberly.

CASE B.

BROKEN AND UNFINISHED ARTICLES SHOWING METHODS OF WORKING.

1-11. Pieces of red freestone and grey limestone smoothed and marked off as if preparatory to making beads. G. Lougheed, Nottawasaga.

12. Stone marked to form pipe. Head portion broken. G. Lougheed, Nottawasaga.

13. Part of what was probably a pipe stem. Now in two pieces—broken lengthwise and showing the bore. A. Lougheed, Nottawasaga.

14. Piece of limestone in process of being shaped as a pipe-head (probably). This illustrates one of the methods of cutting through stone. A row of holes has been bored in the direction of the proposed cut. When broken off, grinding or rubbing has been begun to efface the marks left by the holes.

15. Small, roughly oblong piece of limestone about 1¼ in. long, ½ deep, and nearly ½ in. thick. A hole (oval) about ¾ in. long has been worked on one of the narrow sides, and this penetrates to the opposite side where it terminates as a small round hole. The latter side shows that the piece has been detached from another larger or smaller portion by cutting all round to weaken before breaking. The carving of a human face has been begun on one end. A. Lougheed, Nottawasaga.

16. Portion of large implement quite unlike anything else in the collection. Marks of work are perfectly evident, but the specimen is not easily described. Pike's Farm, Wolfe Island.

17. Rudely formed, or unfinished implement of limestone, semicircular, with projection like a handle on the straight side. Has a general resemblance to an old-fashioned hand meat-chopper. Length of blade 5½ in. and from edge to end of handle 4¼ in. Middlesex Co. M.

18. A flat ovate, striated slate pebble, 4 in. long, greatest width 2⅜, and greatest thickness ⅝ inch. Is deeply cut lengthwise into five sections. Incisions on both sides. Apparently the intention was to break the several pieces off for beads or other ornaments. McGillwray Tp., Middlesex. M.

19. Small piece of limestone pebble, showing a cut-off mark corresponding in kind to that on No. 15 in this case, but much more distinct.

20. Two specimens marked A and B. These are unfinished beads of red freestone like Nos. 1 to 7. The smaller piece, 20 A, is only half an inch long, and has been bored from one end. The larger piece 1⅜ in. long is unbored. G. Lougheed, Nottawasaga.

21. A spoiled or unfinished tablet. (See description, cases N and O.) The four sides have been hollowed to depth of ⅜ of an in., and the corners are rounded. One hole has been partly bored. S.

22. Small cylindrical piece of limestone, 1 in. long, and about ⅝ in. diameter. One side is split off, evidently as the result of boring which has been begun at one end. Albert Lougheed, Nottawasaga.

23. A waterworn, nearly globular pebble; longest diameter 2½ in. Transverse to this a beginning has been made in cutting a groove, as if for attachment to a handle by means of a thong. J. Wood, Lawrenceburg, Indiana.

24. A waterworn stone. Appears to have been at first globular, and 2¼ in. in diameter. Two opposite sides have been rubbed down presenting nearly parallel faces 1½ in. across. M.

25. A spherical waterworn pebble, 2¼ in. in diameter. A hole has been bored into it about ¼ in. deep. Brookfield, Missouri.

26. A waterworn granitic pebble, 2¼ in. in diameter. Shows traces of hand-rubbing in two or three places. Mercer Co., Kentucky. Prof. Moritz Fischer, Curator Ky. Geol. Sur. Mus., Frankfort.

27. Granite, 4¼ long, 3¼ wide, and 1¾ thick in the middle. Although still rough, an immense amount of work must have been done on this stone. The two ends have been pecked down and rounded to half the thickness of the middle, where a ridge has been left, running from side to side as if the intention had been to bore through in that direction. Point Edward, Dr. Rear, Toronto.

28. Waterworn stone, 5 in. long, 2⅜ wide and nearly 2 in. thick; the natural shape has suggested an ax or other tool, and one side has been pecked to make it correspond with the opposite side. The material is a close-grained, dark grey limestone. Dr. Craig, Lawrenceburg, Indiana.

29. Fragment of steatite vessel. Three slit-like holes in this piece are probably of recent origin. Alamance Co., N. Carolina, Prof. Jos. Moore, Earlham College, Richmond, Indiana.

30. Slate tablet 5 in. long, 3½ wide. Apparently unfinished—holes not bored. Lot 25, con. 22, McGillivray Tp. M.

31. Slate tablet, 4 in. by 2¼ in. No holes. Lot 4, con. 4. Biddulph Tp. M.

32. Unfinished implement or weapon of veined blue slate, like 43, 44, 46 and 47, Case M. Dr. Craig, Lawrenceburg, Indiana.

33. Unfinished slate tablet, 4x2¼, with corners rounded. Unbored. S.

34. Slate, three inches long, two and a half wide at one end, one and three-fourths at the other; one inch and a quarter thick at the wider end and having roughly convex sides. At the larger end two holes have been drilled, one 9-16 of an inch in diameter, is 1⅝ inch deep; the other ⅜ inch diameter, is only ⅞ inch deep. The inner or adjoining sides of the holes have met giving the drilling a figure 8 outline, the longer diameter of the double boring being only 1 1-16 inch. At the smaller end the hole is 10-16 inch diameter, and 1⅜ inch deep. Although the length of the borings is equal to the total length of the specimen the holes do not meet, the deeper of the two at the wider end having been drilled somewhat aslant. McGillivray, Tp. Middlesex. M.

35. Piece of argillite, 9¾ in. long, about an inch in diameter, with roughly clipped or pecked, rounded sides, along one of which, as well as at one end, an angular groove has been cut. M.

36. Argillite, 4 in. long, 1 inch in diameter at thick end, and tapering to a point. Is half of an implement like 30 and 31 in case M. M.

37. Tablet (?) 4½x2¼ in. greatest measurements. Thickness in middle, ½ inch. Edges convex, one side slightly convex, the other very much so. Specimen carries what seem to be crystals of calcite. Miss Maria Tipton, Paris Kentucky.

38. Tablet of brown argillite, 3½x1½. 5-16 inch thick. Edges convex. One side nearly flat, other convex. No holes. M.

39. Tablet, much like 38 in material and form, but 4½x1⅝. S.

40. Small hatchet-shaped piece of limestone, showing signs of having been used to sharpen, polish or rub other material. One corner is coated with iron rust owing to the proximity of a small quantity of hematite where it was found, near the east end of Tidd's island opposite Gananoque.

41. Pipe-stem of limestone 3¼ in. long. The workmanship is suggestive of European influence.

42. Much like 41, but only 2 in. long, Both from A. Lougheed, Nottawasaga.

43. Unfinished pipe-stem of limestone, 2¾x1 inch and roughly square. Has evidently been separated from the head after the bowl was bored. Instructive as showing mode of reducing to required size. Deep cuts have been made with flint flakes at intervals of from 3-16 to ¼ of an inch, and the intervening portions have been broken off. A. Lougheed, Nottawasaga.

44. Seems also to have been part of a pipe. It is 3¼ inches long, 1½ thick in one direction, and only a little more than an inch in the other. The two wider sides are flattened and the other two are rounded. Near to one of the round sides a ⅛ inch hole has been bored nearly 1¾ in. deep, in the direction of the longer axis. The same end also shows that the piece of stone has been cut from another by notching deeply (3-16 of an inch) all round, and then breaking forcibly.

45. A roughly blocked out pipe-head of marble, intended for a hole to receive a wooden stem. Vaughan Tp. Dr. Orr, Maple.

46. Two fragments of pipe-stems, limestone, square. Geo. Lougheed, Nottawasaga.

47. Broken pipe-stem, limestone, rounded. Albert Lougheed, Nottawasaga

48. Roughly blocked pipe (?) Perhaps only a water worn stone. S.

49. Piece of limestone, cylindrical, 1 in. in diameter, a hole ⅛ of an inch in diameter has been bored lengthwise close to the outside. The portion between the hole and outside has then been removed, the work now looking like a groove made from the outside. David Melville, Creemore.

50. Rough block for pipe. Baby Farm, Lambton Mills. J. Kirkwood.

51. Three pipe-stems. (See remark, 41.) G. Lougheed, Nottawasaga.

52. Spoiled pipe-head, limestone. The bowl has been badly bored and the stem is broken off. This specimen, three inches long and two wide at the broken mouth, shows that both sides of the bowl have been lined up the middle exteriorly to aid the eye in directing the drill. G. Lougheed, Nottawasaga.

A to S.—Contents of a grave opened on Noncon island by Mr. A. Stevens. The find consists of two bone awls or needles, three tips of deer-horn, a bone spear-head, a wolf's jaw bone, a stone ax, a perforated slate tablet, a bit of pottery, seven flints, and two small pieces of graphite. A. F. Chamberlain, Toronto.

CASE C.

ROUGH FLINTS.

1 to 9. Palœolithic flints from Sussex Mills, England. W. Ransom, Hitchin.

10. Large flint core 10¼ inches long, from which flakes have been chipped. Le Grande Persigny, France. W. Ransom, Hitchin, England.

11. Flint knife. Persigny, France. W. Ransom, Hitchin, England.

12 to 18. Palœolithic implements of flint varying in color from light gray to almost black, and in size from three inches to six inches long.

19. Palœolithic implements. Bedford, Eng. W. Ransom, Hitchin, England.

20. Small barbed arrow head 1⅝ inches long without neck. Derry, Ireland. W. Ransom, Hitchin

21. Small and beautiful barbed and necked arrow head, ⅞ in. long, and ⅞ in. across base of barbs. Antrim, Ireland. W. Ransom, Hitchin, England.

22. Leaf-shaped flint, 1¼ in. long, and 1 in. wide. Antrim, Ireland. W. Ransom, Hitchin, England.

23. Arrow head 1¾ in. long barbed and necked. Antrim, Ireland. W. Ransom, Hitchin, England.

24. Fragment of neolithic implement, apparently about half of a bored axe or club-head, originally upwards of six inches long, but now broken across the hole. Sussex mills, England. W. Ransom, Hitchin, England.

25. Small stone axe in deer-horn handle, from lake-dwelling, Switzerland. W. Ransom, Hitchin, England.

The foregoing were procured through Mr. Jas. H. Pearce of the Institute.

Case C. includes also sixty-nine leaf shaped " flints " from 2 inches to 4 inches long, found in a heap a few inches below the surface, on the farm of Arthur Seabrook, Komoka.

Eight large and rudely chipped implements from Wolfe Island.

And coarse specimens from N. Carolina, Alabama, Georgia, Kentucky, Indiana, Missouri, Ohio and Wyoming.

All in this case are of such a character as would be called " palœolithic " if our data permitted. The total number is nearly 200.

CASE D.

TYPICAL FLINTS.

Contains 240 specimens of " flints " varying from half an inch to six inches in length, and were probably all used as spears, lances or arrows. The arrangement in this case is for the purpose of illustrating, sizes, shapes, material and and modes of fastening to shafts.

Mainly of chert, some are of flint, others of jasper, chalcedony, obsidian and agate. One is of pure quartz.

The territory represented covers many of the United States as well as Ontario.

CASE E.

MISCELLANEOUS FLINTS.

Contains about 200 small flaked "flints" mainly from the United States. The chief donors were Drs. Craig and Collins, Lawrenceburg, Indiana, the Natural History Society of Brookville, Indiana, the Geological Survey of Kentucky; Prof. Jas. Moore, Earlham College, Richmond, Ind.; E. T. Hummell, Decatur, Alabama; the Society of Natural History, Cincinnati; and Prof, J. L. Deming, of the Technological Institute, Boston, Mass.

CASE F.

FLAKED TOOLS AND WEAPONS.

1. Shaly chert, almost black, 8⅜ in. long, 4½ wide, and averaging about ¼ inch thick; no notch for attachment to handle; general outline, an irregular oval. An intrusive vein one line in thickness croses it at a slight angle 2½ in. from the point. May have been intended for a spade or a hoe, but shows no signs of use. From a grave mound in Tremont Park, Tidd's Island, R. St. Lawrence (opposite Gananoque). C. A. See, Tremont Park.

1½. Quartzite, 5½ in. long by 2¾ wide, about ¾ inch in thickest part, has been notched, but is broken at shoulder; rudely chipped, and of irregular outline. Tremont Park, Tidd's Island. C. A. See.

2. Chert, dark brown, 9¼ in. long by 3¾ inches wide, and about ¼ in. thick in middle; broken in three pieces; no notch; signs of wear slightly observable. Tremont Park. C. A. See.

3. Chert, dingy grey, 8½ in. long by 3⅛ wide and ⅜ in. thick in the middle, sides unsymmetrical; notched; neck ¾ inch long. Tremont Park. C. A. See.

4. Flint; not homogeneous; 8 in. long by 3¼ wide, greatest thickness 5-16 in.; thicker towards each end than in the middle; symmetrical; no notch, leaf-shaped, pointed and slightly worn. Tremont Park. C. A. See.

5. Veined quartzite, 6½ in. long by 3 inches wide, leaf-shaped, with a comparatively small neck, thin in proportion to length. Tremont Park. C. A. See.

6. Chert, 7½ in. long by 2⅜ in. wide at base; slightly barbed; neck broken; thin and almost symmetrical; lanceolate. Tremont Park. C. A. See.

7. Quartzite, translucent, 6 in. long by 2⅛ in. wide; notched neck; sides not symmetrical. Tremont Park. C. A. See.

8. Chert, grey and brown, not homogeneous, 9⅜ in. long by 3⅝ in. wide, leaf-shaped; very thin; symmetrical, but slightly curved in direction of flat-side. Tremont Park. C. A. See.

9 to 14. Fragments of similar weapons or tools from same place.

14½. Quartzite, translucent, 4 in. long by 2⅛ in. wide; symmetrical and somewhat thick in proportion to length; leaf-shaped. Tremont Park. C. A. See.

15. Chert, 11½ in. long by 3⅜ in. wide; leaf-shaped; fractured slightly at base; about ¾ in. at the thickest part; symmetrical; this is the largest flaked implement in the museum. Pickering Tp. Jas. Dickson, Fenelon Falls.

16. Cherty limestone, 7¼ in. long by 3 in. wide; very thin; notched neck· Wolfe Island.

17. Fine chert, 6¼ in. long by 3⅜ in. wide; short and deeply notched neck, forming semi-barbs; beautiful heart-shaped outline. Wolfe Island.

18. Coarse chert, 4⅞ in. long by 3⅞ in. wide; neck ¾ in. long and 1 inch wide; somewhat rudely chipped; very broad in proportion to length. Wolfe Island.

19. Chert, 5 in. long by 2¾ wide; slightly barbed; neck ¾ in. long by 1 in wide. In this specimen there is a well-defined oval nucleus exactly in the middle and showing both sides; on one side this measures about 2 in. by 1½ in., and on the other 1¾ in. by 1⅜. Wolfe Island.

20. Fine veined chert, 5½ in. long by 2½ in. at base; sides little curved; straight neck ¾ in. long. Edges thinned from left side; very thin in proportion to length. Biddulph Tp. M.

21. Chert, 5½ in. long by 1⅞ wide; point broken; straight neck 1¼ inch long, very thick. Sarnia Indian Rererve. M.

22. Impure chert. 5½ in. long by 2¼ in. wide; sides almost straight; notched neck. East Williams Tp. M.

23. White chert, 8¼ in. long by 3 in. wide; unsymmetrical; leaf-shaped. Plympton Tp. S.

24. Chert, 8 in. long by 1⅝ in. wide; symmetrical and gracefully formed; neck faintly marked off from body, 1⅝ inch long. McGillivray Tp. M.

25. Chert, 5½ in. long by 2½ wide; notched neck ¾ in. long and same width; body comparatively thick. Wolfe Island.

26. Chert, 5⅜ in. long by 1⅞ in. wide, squarely-shouldered neck, ¾ in. long and pointed. McGillivray Tp. M.

27. Chert, 4¾ in. long by 1⅞ in. wide; slightly notched neck; edges symmetrical, one side flat. Middlesex, Co. M.

28 to 39. Chert, group of weapons from 4½ in. to 8½ in. long, and from 2½ in. to 3¼ in. wide at base. With the exception of No. 28, they are all of the same pattern, being square’shoulderd and having heavy, strong necks about an inch long. No. 28 is almost leaf-shaped, the neck being abortive. These "flints" were found together at the edge of a swamp on gore lot 27; N. B., West Williams Tp. M.

40. Dark brown flint, 5¼ in. long by 1⅞ in. wide; notched neck ½ in. long, and forked at base. Wolfe Island.

41. Brown cherty limestone, 5⅛ in. long by 1⅛ in. wide, neck broken. Plympton Tp. S.

42. Chert, a beautiful leaf-shaped specimen, 8½ in. long by 2½ in. wide, and scarcely a quarter inch thick; edges flaked chiefly from right side. Wolfe Island.

43. Chert, leaf-shaped, 7½ in. long by 2½ in. wide; tip broken, symmetrical and elegant. McGillivray Tp. M.

44. Very coarse chert, leaf-shaped, 6¾ in. long by 2 in. wide; rudely chipped. Biddulph Tp. M.

45. Chert, 5⅛ in. long by 2⅝ in. wide; notched neck, ½ in. long by 1¼ in. wide; roughly flaked and unsymmetrical. Wolfe Island.

46. Chert, 5¼ in. long by 1⅝ in. wide; square shouldered, neck ¾ in long. This specimen is very thick in the middle in proportion to length.

47. Coarse chert, 5 in. long by 1⅜ in. wide; neck has a slightly square shoulder, and is 1⅛ in. long, being rounded at base. Madison Co., Ky. Dr. Collins, Lawrenceburg, Ind.

48. Fine chert, 4¾ in. long by 1½ in. wide at base, leaf-shaped; edges flaked from left side and slightly serrated; body almost flat otherwise and about ¼ inch thick. Fayette Co., Kentucky. Dr. Collins, Lawrenceburg, Ind.

49. Light bluish flint, 6¾ in. long by 2½ in. wide at base; leaf-shaped; edges rudely flaked. Forest. S.

50. Milky quartzite, 5¾ in. long by 1½ in. wide; neck notched and equal in breadth to base of body; tip broken; body ⅜ in. thick in middle, cross section would show a good ellipse; not quite symmetrical in the edges. St. Mary's. S.

51. Coarse chert, 5 inlong by 2⅜ in. wide; leaf-shaped; edges symmetrical and much curved, the general outline being more egg-shaped than is usual. No locality. S.

52. Very dark (almost black) chert, with light colored veins; 4⅝ in. long by 1¾ in. wide; middle of body ⅜ inch thick and smoothly flaked to edges; deeply notched neck, which is also hollowed at base;, very symmetrical. North Branch, Mich. S.

53. Chert, 3¾ in. long by 2 in. wide; straight neck 1 in. long; barb ½ in. long, one barb off. Bourbon Co., Ky. Dr. Collins, Lawrenceburg, Ind.

54 to 58. Five notched necked "flints," varying from 4 in. to 4½ in. long, and from 2 in. to 2⅝ in. wide. McGillivray Tp. M.

59. Chert, 6 in. long by 2⅝ in. wide; point broken; straight neck; rudely flaked. West Williams. M.

CASE G.

Bone and Horn.

1. Small turtle shell perforated with sixteen holes. Has probably been a rattle. Beverly. Dwyer col.

2. Bone, somewhat cylindrical, 1¼ in. diameter, rudely worked at each end. York Tp. B. Jackes, Toronto.

3. Splinter of deer-horn, 9 in. long and about 1 in. wide. Edges appear to have been hacked with a sharp tool. One end roughly sharpened; other end broken. Nottawasaga. Lougheed col.

4. Bone of beaver's tail. Found with many relics in London, Ont., by Jas. McDowell, 1849. M.

5. Part of turtle shell, semicircular, 2¾ in. diameter, perforated with three holes.

6. Gouge or chisel of deer-horn, 7¾ in. long and 2⅛ in. across widest part; 1½ in. behind lip. Beverly. Dwyer col.

7. Horn chisel, 7 in. long, and 1¼ wide. Considerably injured; head broken. York Tp. Y. P. col.

8. Bone knife, 8 in. long. Y. P. col.

9. Circular portion of human skull, 4 in. diameter, three holes bored 1 in. apart in middle, as if at the angles of an equilateral triangle. Three smaller holes have also been bored close to the margin triangularly. York Tp. Geo. Miller.

10. Circular portion of human skull, 4 in. diameter, unperforated. No work done on it beyond rubbing down the edges smoothly, and scouring the outside. Aurora, York Tp. S.

11. Portion of human skull, somewhat oval. Longer diameter, 4¼ in., shorter diameter, 3⅝ in. Perforated with seven holes, six of them in pairs from ⅝ in. to 1 in. apart, but not regularly arranged. The odd hole is near the margin of the longer axis. Beverly. Dwyer col.

12–16. Horn tips sharpened to chisel points. Kitchen midden. Vancouver, British Columbia. James Johnson, Vancouver.

17. Rude bone awl. Kitchen midden. Vancouver. James Johnson, Vancouver.

18. Bone awl—ditto.

19. Bone awl—ditto. Point broken.

20. Deer-horn fork; one tip broken. Has had a hole at base of prong. Lower part now broken away; 4 in. long. Beverly. Dwyer col.

21. Deer-horn fork, 4½ in. long, and tip of longer prong broken. A 7/16 inch hole bored at base of fork 2½ in. from tip of smaller prong. A base of 2 inches extends beyond the hole, where the cut-off marks are very plain. Beverly. Dwyer col.

22. Horn-tip, split and blackened by fire; 3 in. long. Point has been sharpened. Noncon Island, Lake Scugog. Jas. Stevens, per A. F. Chamberlin.

23. Bone spear or harpoon, 5½ in. long, but a portion of the shaft has been broken off. Greatest width at end of shaft 11/16 in., 2 in. from point shaft narrows to ⅜ in, and the head consists of a flat portion decreasing from 9/16 in. to a point, and having on each side five barbs. The bone is grooved longitudinally on each side. Near Simcoe Town. S.

24. Horn spear or harpoon (single-barbed), 8 in. long. Breadth of shaft from hole 1 in. This part is flat and 2 in. long. with square shoulders where it meets the middle portion which is a flattened oval 3⅝ in. long from the shoulders to the inner angle of the barb The barb itself is ⅜ in. long, and from its tip to the point of the spear is 2⅜ in. Beverly. Jas. Rae.

25. Bone spear or harpoon (three-barbed on one side) 6½ in. long, point broken a little; barbs deeply cut. From broken point to tip of first barb is 2 inches; from tip of first to tip of second barb 1 5/16 in.; from tip of second to tip of third barb 1⅜ in. The shaft from inner angle of third barb is 2 in., 1¼ in. from shaft end and below the third barb; close to edge is an oval hole about ¼ in. the longer way. The shaft end has been ground down to a chisel point, and has no doubt had a secondary use. Victoria Co. Dickson col.

26. Harpoon, three-barbed, 5⅜ in. long; hole 1¼ in. from shaft end, and eccentric towards barbed edge. Barbs slightly ogee on edge; axils well rounded. York Tp. Jackes col.

27. Point of spear-head 2¾ in. long, three barbed on each side. Shaft portion remaining 1¼ in. long, and ⅜ in. wide. Five barbs square shouldered —one a little under cut. Breadth across widest portion of barbed end ½ inch. Lake Medad.

28. Fish-hook. Length from upper end to curve 3 7/16 inch; barbed end from curve to point 2 1/16 in.; thickest portion of shaft at curve ¼ in., tapering to ⅛ in. near upper end; shaft terminates in small knob about ¼ in. diameter; carved part averages fully ¼ in., with inside fairly rounded, and outside more angular and roughly finished; barb from tip to tip 1 7/16 in., with axil 3/16 deep; width between shaft and barb axil ½ in., between tip of barb and inner curve ¼ in., and between tip of hock and shaft ⅜ in. One side of curve appears as if gnawed, leaving four bars with a slight bend running across it from the barbed side towards the shaft side. Lindsay. S.

29–30. Two halves of beaver's upper jaws. Grave, Onentisati, Simcoe Co.

31. Lower jaw of beaver. Grave, Onentisati, Simcoe Co.

32–34. Bear's teeth. Grave near Orillia. Jas. Fraser, Craighurst.

35–41. Bears' teeth. Village site, Nottawasaga. Lougheed col.

42. Bear's tooth. Ste. Marie, Simcoe Co.

43. Walrus tooth. Balsam Lake, Ont. T. Bell.

44–52. Small compressed pear-shaped teeth (elk's) about 1 in. long and ½ in. wide. These are ground smooth at small end and are then perforated. No locality. Y. P. col.

53. Bone 2¾ in. long, carved to represent a fish. The outline is somewhat whale like; 5/16 in. from nose and ⅛ in. from throat, are what may have been intended for gills (not if a whale). A small hole has been bored from side to side, 3/16 in. in advance of this and a little higher are two small depressions. These are too far forward for eyes, and too high as well as too far back to be nostrils. They were probably meant for eyes. Mouth deeply cut and extending back almost to the gills. No imitation of fins or tail. At tail end 7/16 in. on the upper side relieved by nine lines cut at right angles to long axis, and eight lines crossing these diagonally from left to right. Exeter. S.

54. Human form—bone; 31/16 in. long; width at shoulders 9/16 in. Right arm placed on left shoulder. Left arm extending to right side of waist. No feet The figure is proportionate. While head and neck measure 7/16 in., the body is fully 1 9/16 in., and the legs only 1 1/16 inch long. Beverly Tp. Rae col.

55. Bone mask, human; 2⅛ in. long, and ⅝ in. wide. Eye holes are bored through. Nottawasaga. Lougheed col.

56. Horn, spear or harpoon, one barb. Shaft end 3⅛ in. long, and 1⅛ wide. Hole near middle two inches from end. Flat portion at shaft end shouldered down to ⅝ in., then rounded on edges to tip. Barb, tip to tip, 2 1/16. Axil ¼ in. deep, and nearly same width. Shaft end behind hole, whittled, and hole has been cut through, not bored; or else has been enlarged by cutting after boring. York Tp. Long col.

57. Deer-horn fork, 3½ in long, cut off squarely at butt or lower end. One prong is 2⅛ in. and the other 1¾ in. long. Greater diameter of butt at

cut ¾ inch. Across upper side of larger prong, and lower side of the other, and in a line with the axil two grooves are worn as if the object had been employed as a tool to smooth thongs or sinews by rubbing them lengthwise. About midway below the prongs other fainter grooves are perceptible. Humberstone Tp., Welland Co. Cyrenius Bearss.

58. Bone chisel 11⅞ in. long, and averaging 1⅛ in. across blade. This tool is made of an undetermined quadruped's leg bone, a cross section of which is roughly quadrangular. The upper or handle end is almost square and about 1½ in. on each side. For 2¼ in. the bone has been left intact, beyond rubbing the joint down to a level surface. At this distance the wall on one side is cut sharply down until the cavity of the bone is reached, and the whole side is made to taper beautifully to the lip, giving the tool when viewed edgewise the appearance of an elongated wedge. Nottawasaga. Thomas White.

59. Bone chisel or gouge, 11¼ in. long. This appears to be made from a leg-bone, but is quite unlike No. 58. A cross section of it would be oval, and the diameter is less in the middle than at the ends, being 1½ in. near the lip, 2 in. near the joint, and only 1¼ in. at the middle. The processes at the joint have not been altered in any way, and the rubbing down to produce a cutting edge extends back only about 5½ in. The tool bears evidence of long use. Nottawasaga. David Melville.

60. Five wolf's teeth. Village site. Nottawasaga. Lougheed col.

61. Cylindrical bone 3¼ in. long, and 5/16 in. diameter, rounded at one end. Humberstone Tp. Cyrenius Bearss.

75. Portion of human skull like No. 10. Vaughan Tp. Dr. Orr, Maple.

ESKIMO. Presented by F. F. Payne, Esq.

62. Comb, 2½ in. from back to point of teeth, 1½ wide.

63. Four pendants, conical and perforated at flattened ends.

64. Powder measure, 1⅝ in long, ½ in. wide and ½ in. deep. Formed somewhat like a grocer's scoop. A small hole for suspension when carried is bored through the lower corner of the larger end.

65–66. Two human figures in bone, 1¾ in. long.

67. Forty-three pieces of bone from ⅝ to 1⅝ in. long, and from ⅜ in. to ⅝ wide, generally decreasing in width towards one end which is rounded. These are marked like dominoes. The highest number on this set is 39. The game is not played as are dominoes, but seem to be a kind of grab-game.

68. Bone thimble.

69. Bear, 1¾ in. long.

70 Seal, 1⅝ in. long.

71. Fish, with fins and tail, 1½ in. long.

72. Water-fowl, 1½ in. long.

73. Dog, 1 in. long.

74. Toothpick, about 2 in. long.

CASE H.

BONE AND HORN.

1 to 24. Bone awls or needles from 7 in. to 3 in. long. York Tp. Wm. G. Long.

25. Eyed needle, 3¾ in. long, ¼ in. wide and 1/16 in. thick in middle, oval hole, 3/16 in. long and less than 1/16 wide at an in. from end. Grooves on both sides extending from ends of hole, bone slightly curved, with natural hollow on concave side. Both ends thinned and rounded, but left flat. Point end the more so, being highly polished and very sharp. York Tp. Wm. G. Long.

26 to 37. Bone awls from 3½ to 2½ in long. Various localities.

38 to 43. Bone awls from 4½ to 3 in long. York Tp. B. Jackes, Toronto.

44 to 45. Bone awls. London Tp. M.

46. Bone awl. Onentisati, Simcoe Co.

47 to 49. Bone awls. Beverly Tp. Dwyer col.

50 to 54. Tarsal bones of deer, two are ground flat on both sides exposing the cavity, one has had the larger end cut wholly out and a small hole bored obliquely through the opposite end. One has been ground flat on one side but is otherwise intact, and one has been bored into from each end.

55. Two fragments of horn implements and two splintered bones, (one whittled) from kitchen midden, British Columbia. Jas. Johnson, Vancouver.

56. 2 bone awls, 5½ in and 2¾ in long. Dumfries Tp., near Galt. Jas. G. Caven, Toronto.

57. Almost cylindrical bones, 2 in. long and ⅜ in. diameter, rounded at both ends. Nottawasaga. Lougheed, col.

58. Bone, small, 3 in. long, cut at both ends, has one notch; perhaps a tally or record bone. Beverly.

59. Bone 3¼ in. long and from ½ in, to ¾ in. in diameter, cut at both ends. Either a bead or a tally bone. Beverly.

60. Five bone beads from 2 in. to 3⅜ in. long. Nottawasaga. Thos. White.

61 to 64. Four bone beads, respectively, 4¼, 2⅝, 2⅜ and 1 in. long. Y. P. col.

65. Deer-horn tip, cut at large end and ground at point, 5 in. long Y. P. col.

66. Cylindrical bone 3⅜ in. long, general diameter 5-16 in., rounded at both ends. From larger end two parallel lines have been scratched lengthwise 1½ inches between which are four diagonal crosses.

67. Horn tip 3⅜ in long, ends rounded, weathered. Y. P. col.

68. Horn tip 2 in. long, ends rounded. Y. P. col.

69. Cylindrical bone bead 3⅛ in. long and ½ in. diameter. Guelph Tp. Dr. Hugh G. Roberts.

70 to 72. Three bone beads respectively 3¼, 1⅜ and 1⅛ in. long. Beverly.

73. Oblong section of horn 2 in. long, smoothed on all sides and one end; other end broken off. Has four transverse slight cuts on outer side, as if marked for cutting off. Beverly. Dwyer col.

74. Tally bone 3 in. long, ⅜ in. diameter, triangular at one end and rounded at the other. Has three rows of small notches on edges extending in line of angles. On each of two rows are twenty-nine cuts, and on the third twenty-eight. Beverley. Dwyer col.

75 to 80. Six bone beads about 1 in. long. Waterdown.

81. Heavy bone bead 3⅞ in. long and ½ in. by 1 in. diameter. Dumfries Tp.

82. Bone bead 2⅜ in, long. Dumfries Tp.

83 to 85. Three bone beads, 3 in., 2¾ in. and 2½ in. long. Sarnia Tp.

86. Bone 2 in. long and 1 in. diameter, cut off squarely at smaller end leaving small portion of detached section adhering. Larger end has eight notches deeply cut leaving the margin like saw teeth round the cavity. Beverly. Dwyer col. A doubtful specimen.

87. Tarsal deer-bone, rubbed down a little on one side, opposite has four cross-bars of a dark color as if burnt. Dumfries Tp.

88 Tarsal deer-bone, on one side ground flat exposing cavity at upper end. Opposite side ground in such a manner as to suggest a whistle. Dumfries Tp.

89. Portion of deer-horn, near base 3 in. long, marks of cutting at both ends. Beverly.

90. Tally-bone (?) 2¼ in long, triangular cross section; although slightly notched as in the case of those that seem to be records, this is somewhat dubious as the markings appear to be without any method or arrangement. Most of them also are on one of the flat sides and not along the ridges. Beverly. Dwyer co

91. Bone bead 1 in. long, with two small notches near the larger end. Beverly. Dwyer col.

92. Fragment of bone 1⅛ in. long with serrated edge and two deeply cut lines lengthwise. Beverly. Dwyer col.

93. Tally-bone 2¾ in. long, with three rows of lightly cut notches, counting respectively twenty-one, fourteen and fourteen. Beverly. Dwyer col.

94. Bone needle or awl 5¼ in. long, both ends damaged. Nottawasaga Lougheed col.

95. Tally-bone 3⅜ in. long, notched on two ridges, total number twenty-eight or twenty-nine. Beverly. Dwyer col.

96. Small piece of bone ⅝ in long, split, cut and smoothed at each end. Nottawasaga. Lougheed col.

97-100. Four bone beads, 4⅝, 4⅜, 4¼ and 2¾ in. long.

101. 2¼ in. long and ⅜ in. wide at widest part. Less than ⅛ in. thick, lance-shaped with notches forming a neck ¼ inch from wide end.

102. Horn bead, 1¾ in. long. Ohio, U. S. Soc. of Nat. Hist. Cincinnati.

103. Bone bead, 1⅝ in. long. " " " " "

104. Bone bead, ⅝ in. long. " " " " "

105. Cylindrical bone, 1½ in. long, ends rounded like No. 57. Ohio, U. S. Soc. of Nat. Hist., Cincinnati.

106. Tally-bone 4 in. long, almost round at smaller end and oval (one side depressed) at the other, average diameter ½ in. 1⅝ in. from the larger end

and extending towards middle are two rows of markings, numbering in each case twenty-eight.* Tidd's Island, R. St. Lawrence.

107. Deer-horn tip bored out, 2⅞ in long. Ohio, U. S. Nat. Hist. Soc. of Cincinnati.

108. Horn chisel pointed, 5 in. long. Ohio. Nat. Hist. Soc. of Cincinnati.

109. Idem, point broken.

110. Splintered bones, ash-heap. Lake Medad.

111. Small bone chisel. Nottawasaga. David Melville.

112. Bone awl or needle 6 in. long. Nottawasaga. Wm. Melville.

CASE. J.

SHELL.

1. Beads or wampum made from columellæ of pyrula perversa, probably. Beverly Tp. Dwyer col.

2. Four beads from 2½ to 4 in. long and from ¼ in. to ½ in. diameter, from columellæ of large shell, (species not identified) Beverly. Dwyer col.

3. Wampum (discs) from ¼ in. to ⅝ in. diameter and averaging under ⅛ in. thick. This large number was found in an ossuary in Beverly. Dwyer collection. Some of them (in one instance six) adhere face to face, showing that they had been carried or worn that way and not edge to edge as they are usually strung in collections.

4. Eight fragments of p. perversa, broken and cut in preparation for the making of wampum. Nottawasaga. Chas. Smith, Smithdale.

5. Six fragments of large shell partly cut in preparation for wampum. Nottawasaga. Lougheed col.

6. Two fragments, ditto. Beverly. Jas. Rae.

7. Two strips, ditto. Beverly. Dwyer col.

8. Three pieces. Two bored at margin and one about an inch long and ⅜ inch wide, marked off into ten small squares.

9. Four fragments of p. perversa. Beverly Tp. Jas. Rae.

10. Fragment of large shell. Beverly. Dwyer col.

11. Two spiral shells from which the body whorls have been cut, leaving the columellæ bare. Through the anterior end of one a small hole has been bored Nottawasaga. Lougheed col.

12. Spiral shell, bored through the tip. Nottawasaga. Lougheed col.

13. Wampum, (disc and cylinder). Nottawasaga. Lougheed col.

14. Wampum (disc) Beverly. Dwyer col.

15. Wampum, one large disc, fully ¾ in. diameter and four cylinders from ½ in. to 1 7/16 in. long. Nottawasaga. Lougheed col.

16. Wampum (discs) Baby Farm, York Tp. W. Kirkwood.

---

* The recurrence of 28 and the lesser multiples of 7 are suggestive of lunar computation of time. Compare Nos. 93 and 95. Even in No. 90 the markings count not more than thirty, but lack of order and precision makes the number uncertain.

17. Solid cylinder ½ in. long and ⅜ in. diameter. Beverly Tp. Dwyer col.

18. Triangular bead. Beverly. Dwyer col.

19. Bead, columellæ of p. perversa, with hole through middle of side to meet other hole from end. Beverly. Dwyer col.

20. Eight beads, cylindrical. Some of these are very beautifully made. Baby Farm, York Tp. W. Kirkwood.

21. Pendants (two). Beverly tp. Rae collection.

22. Half of circular ornament ⅞ in. diameter and 3/16 in. thick, bored through edgewise and ornamented with dots round the margin as well as across. S.

23. Two triangular pieces of unio. Edges smoothed. Perforated near one angle.

24. Two long cylindrical beads and four small ditto. The latter probably of European manufacture. Beverly. Dwyer col.

25. Two beads (cylindrical). One 1½ in. long and ¼ in. diameter is only bored a short distance from each end in the direction of its length, and holes are bored from the sides near the end to meet these. Beverly. Rae col.

26. Wampum (purple, nine pieces, discs). Nottawasaga. Lougheed collection.

27. Pendant, 2 inches long, ⅜ inch diameter. Hole bored at one end and through corner. Nottawasaga. Lougheed col.

28. Two fragments of beads. Nottawasaga. Lougheed col.

29. Bead partly bored. Nottawasaga. Lougheed col.

30. String of columella beads. Y. P. col.

31. String of columella beads (small). Y. P. col.

32. String of wampum (disc). Y. P. col.

33. String of wampum (disc). Y. P. col.

34. String of wampum (disc). Y. P. col.

35. Unio valve, ossuary. Beverly. Dwyer col.

36. Three unio valves, ossuary. Ste. Marie. Simcoe County.

37. Large spatulate ornament, 8 in. long, 3 in. at widest and narrowing to rounded end about 1¼ in. across. Has two holes, one near middle and one near large end.

38. Ornament 2 in. long; half oval across short diameter. Hole bored near edge in middle of short side.

39. Circular ornament about 2¾ in. diameter. Has a ⅜ inch hole near centre and two small holes ⅞ in. apart, near edge.

40. Circular ornament 3¾ in. diameter, bored as in No. 39.

41. Half of ornament, originally larger than No. 40, bored in the same way as No. 39.

42. Fragment of ornament like Nos. 39 and 40.

43. Similar to Nos. 39 and 40. Stained green, with copper.

No. 37 to 43 inclusive form part of the contents of a grave opened on the east side of Blackfriar's Bridge, London, Ont., in 1849, by a Mr. John McDowell. M.

44. Gouge—Barbadoes, W. I., Toronto Nat. Hist. Soc.

45. Gouge—Barbadoes, W. I., Toronto Nat. Hist. Soc.

46. Two unio valves with large hole punched through centre of each. Cincinnati Nat. Hist. Soc.

47. Wampum ("cock-spur shells"). Pacific coast. D. H. Price.

48. Circular ornament, like No. 39 to 43, but without the middle hole. Norfolk county. S.

49. Four unio valves from ash-heap. Lake Medad.

50. Is much like No. 37, but shorter and broader. Three holes are bored across the widest part, about 1½ in. from the end. This is one of a few old gifts to the Institute but has no record.

51. Wampum (discs). Humberstone Tp. Mrs. Barney, sen.

52. Five pieces of black wampum (discs), two cylindrical and one serpentine bead. Y. P. col.

53. Wampum—unfinished specimen, incomplete rounding and boring. Beverly. Dwyer col.

54. Bead, 3½ in. long, side broken exposing hole. Nottawasaga. Lougheed col.

55. Bead (cylindrical). Near Sarnia. S.

CASE K.

Gouges.

1. 7½ in. long; width at mouth or edge, 1¾ in.; hollowed, 3¾ in.; tapers to rounded head about ⅜ in. in diameter, Limestone. Western Ontario.

2. 8¼ in. long; mouth, 2 in.; width in middle, 2⅜ in; at head 1¾ in.; thickness in middle, 1¼ in.; hollowed 4 in. Groove flared near lip. Sides sharply cut and narrowing rapidly towards top. York tp. James Kirkwood.

3. 7 in long; 2⅛ wide at mouth; scarcely any taper; 1¼ in. thick; hollowed 3 inches, slightly; head broken. Striped slate. Ancaster. William Forbes.

4. 10½ in. long; mouth rounded and 1⅜ in. wide; width in middle, 2 in., tapering to ¾ in. at head; hollowed 8 in. slightly. Edges of hollowed side from top to mouth comparatively straight. Opposite side sharply rounded transversely and much curved lengthwise; greatest thickness being 1¾ in., and tapering to ⅜ in. at head. Granitic. Victoria County.

5. 5⅜ in long; 1¼ in. wide, tapering slightly to head; hollowed, 2½ in.; sides flat; ⅝ in. thick. Erin Tp. R. McRae.

6. 6 in. long; width at mouth, 1⅞ in.; at head, 1¼ in.; hollowed, 2¾ in.; 1¼ in. thick. Upper side flat; lower rounded throughout. Granitic. Humberstone Tp. Cyrenius Bearss.

7. 3⅞ in long; width at mouth, 1⅞, tapering to rounded top about ⅝ in. diameter; hollowed, 2 in, slightly. Greatest thickness near head, ⅞ in. Granitic. Adjala Tp. Mr. Connor, Toronto.

8. 6¼ in. long; width at mouth, 1⅜ in.; at head, 1½ in.; hollowed, 3 in., as in No. 2. Greatest thickness, 1⅛ in. Compact greenstone. Near Lindsay.

9. 9 in. long; width at mouth, 2 in. No taper. Hollowed, 4 in. Head broken. Upper side flat, lower side rounded throughout. Blue slate. Victoria County. S.

10. 8¾ in. long; width at mouth, 1¾ in. Lip rounded, tapers to rounded head. Hollowed, 5 in. Greatest thickness, 1½ in. Dark limestone. Chinguacousy Tp.

11. 9½ in. long; width at mouth, 1¾ in. Tapers to rounded head. Hollowed 4 in. Sides flat, edges rounded. Greatest thickness, 1⅜ in. Victoria County. Jas. Dickson.

12. 6½ in. long; width at mouth, 1⅞. Tapers to ¾ in. Hollowed total length, deeply; the edges left along the sides of the groove being only about ⅛ in. wide. Pilkington Tp.

13. 8½ in. long; width at mouth, 2¼ in.; at head, 1½; hollowed, 3½, as in Nos. 2 and 8; greatest thickness, 1⅜. Buff colored material, resembling lithographic limestone. Near Belleville. S.

14. 7⅜ in. long; width at mouth, 1¾ in.; in the middle nearly 2 in. Tapers very slightly to rounded head. Hollowed, 3 in.; greatest thickness, 1½ in. Much weathered. Granitic. No locality. Y. P. col.

15. 6 in. long; width at mouth, 1⅞ in. Tapers to 1 in. at flattened head. Hollowed 3½ in. Granitic. Victoria County. Jas. Dickson.

16. 6½ in. long; width at mouth, 1¾ in. Tapers to 1¼ in. at flattened head. Upper side flat, lower side rounded except near head where it is flat, giving head a triangular look when viewed endwise. Hollowed 3½ in. Greatest thickness, 1¼ in. York Tp. Jas. Kirkwood.

17. 7¼ in. long, and 2¼ wide. Hollowed 3 in., slightly; other portions rounded. Blue slate. York Tp. Jas. Kirkwood.

18. 10 in. long; width at mouth, 2⅛ in., tapering to 1 in. at head. Hollowed from end to end, deeply; 1¼ in. at lip, and ¼ in. at head. Greatest thicknes, 1¾ in. Material like No. 13. Victoria County. S.

19. 4½ in. long; width at mouth, 1½ in., tapering gently to head. Hollowed 2¼ inches. Upper side flat, lower rounded. Head a little broken. Greatest thickness, ⅞ in. Granitic. Pilkington Tp.

20. 14 in. long; width at mouth, 1¾ in.; at head, 1¾ in.; hollowed, 5 in. Lower side and both edges flat for 4 in. at mouth end, the corners only being rounded to correspond with the groove; all remaining portion rounded. Limestone. No locality. John Hind.

21. 6 in. long; width at mouth, 2 in., tapering to 1 in. at head. Hollowed, 2 in. Thickness, 1 in. Schistose slate. Western Ontario. S.

22. 3½ in. long; width at mouth, 2 in.; at head, 1¼. Hollowed slightly from end to end. Granitic. Pickering Tp. G. Welborne.

23. 3½ in. long; width at mouth, 1⅝, tapers to rough head about 1 in. across. Hollowed slightly, 1½ in. Lower side ridged. Gneiss. Pike's Farm, Wolfe Island.

24. 3¼ in. long; width at mouth 1 in., tapers to ½ in. at head. Hollowed deeply the whole length. Greatest thickness, ½ inch. Port Perry. S.

25. 3¼ in. long; width at mouth, 1⅛ in. Hollowed 2 in., as in Nos. 2, 8 and 13. Thickness, ½ in. No locality. S.

26. 5 in. long; width at mouth 2 in. Tapers (with slight depression on each side mid-way) to rounded head 1¼ in. Can barely be called a gouge

as the hollow is scarcely ⅛ in. deep, and extends but a short distance from the lip. Upper side flat, lower round and curved lengthwise. West Middlesex. M.

27. 7¾ in. long; width at mouth 2½ in. Tapers with slightly convex sides to rounded head about 1¼ in dia. Hollowed only about 1/16 in. at lip, and only ¾ inch at back. Upper side flat, lower round. Granite. West Middlesex M.

28. 7¾ in. long; width at mouth 1½ in. A litle wider in middle. Head 1 in. dia. Hollowed slightly, 2½ in. from lip, upper side flat, lower rounded and much curved lengthwise. No locality. Y. P. col.

29. 8¼ in. long; width at mouth 1⅞ in. Tapers to 1 in. Well rounded head. Hollowed 3¼ in. deeply. Upper side slightly rounded, lower side very much. Immediately behind groove, but on the under side a transverse groove has been cut for handle attachment. Granite. McGillivray Township. M.

30. 6¼ in. long; width at mouth 1¾ in. Tapers to ⅝ in. at rounded head. Hollowed slightly for 2½ in. Upper side flat. Granite. West Middlesex. M.

31. 6¾ in. long; width at mouth 1⅝ in. Sides convex. Head 1⅜ in. Hollowed slightly 1½ inches from lip. Upper side flat. Granite. West Middlesex. M.

32. 6 in. long; width at mouth 2⅛ in. Tapers to rounded head 1 inch. Hollowed deeply 2½ in. Upper side flat. Head rounded. McGillivray Township. M.

33. 4½ in. long; width at mouth 1¾ in. Tapers to rough head 1¼ in. Hollowed from end to end deeply. Serpentine. No locality S.

34. 5½ in. long; width at mouth 1¾ in. Tapers rapidly to ¾ in. at broken head. Hollowed from end to end deeply. Thickness 1¾ in. in middle. Lower side has two sharply cut notches as if for binding to a handle. These are ⅝ in. apart, the lower one being 3⅛ in. from lip. They extend only half way round. Brookfield, Mo. Dr. Rear, Toronto.

35. 4 in. long; width at mouth 1⅝ in. Tapers to ½ in. at smoothly rounded head. Hollowed from end to end. 1 in. thick. Addington County. Dr. T. W. Beeman, Perth. (O. L.)

36. 5⅛ in. long; width at mouth 1½ in. expanding for remainder of length to 1⅞ in. Hollowed 2⅛ in. Thickness ½ in. Head rough. Lanark County Dr. T. W. Beeman, Perth. (O. L.)

37. 6¼ in, long; width of mouth (which is rounded) 1⅞ in. Hollowed very slightly nearly the full length. West Middlesex. M.

38. 5⅞ in. long; width of mouth 1⅞ in., expands slightly and tapers to 1½ in. at head. Hollowed 2⅝ in. Upper and lower sides flat, with corners chamfered. Thickness 1 in. Argillite. Humberstone Tp. Gustav Utz.

39. 8½ in. long; width at mouth 1½ in., enlarges behind to 1⅞ in. Tapers to rough head 1 in. Hollowed 3½ in. Sherbrooke Tp. Dr. T. W. Beeman, Perth. (O. L.)

CASE L.

STONE PIPES.

1. Nottawasaga Tp. Lougheed col.
2. Nottawasaga Tp. Wm. Smith, Toronto.
3. Nottawasaga Tp. Herbert Connor.

4. Orillia. S. G. Plunkett, Toronto.
5. Albion Tp. S.
6. Eglinton, York Tp. Y. P. col.
7. Eglinton, York Tp. Y. P. col.
8. Sault Ste Marie. Y. P. col.
9. Eglinton, York Tp. Y. P. col.
10. Eglinton, York Tp. Y. P. col.
11. Eglinton, York Tp. Y. P. col.
12. Eglinton, Y. Tp. York P. col.
13. Victoria Co. S.
14. Nottawasaga Tp. Lougheed col.
15. Nottawasaga Tp. Lougheed col.
16. Kent Co. Y. P. col.
17. Nottawasaga Tp. Lougheed col.
18. Probably modern North-west. Y. P. col.
19. Newmarket. Stew. col.
20. Burlington Beach. Y. P. col.
21. Nottawasaga Tp. Lougheed col.
22. Nottawasaga. Lougheed col.
23. Forest. S.
24. Near Milton. Finlay McCallum.
25. Victoria Co. Dickson col.
26. Modern North-West. Y. P. col.
27. Markham. S.
28. Nottawasaga Tp. Catlinite. Ed. Beecroft.
29. Modern Northwest. Catlinite. Y. P. col.
30. Victoria Co. Dickson col.
31. Beverly Tp. A. McKnight.
32. Nottawasaga Tp. Lougheed col.
33. York Tp. Y. P. col.
34. Nottawasaga Tp. Lougheed col.
35. Tremont Park, Tidd's Island. C. A. See.
36. Plympton. S.
37. Nottawasaga Tp. Lougheed col.
38. Pembina. Manitoba. S.
39. Nottawasaga Tp. Ed. Coyle.
40. Kincardine. M.
41. Ste. Marie, Simcoe Co.
42. Stem catlinite modern North-west. York P. col.
43. West William Tp. M.
44. Wiarton. M.

45. Nottawasaga Tp. Dugald Currie.
46. London Tp. M.
47. Wiarton. M.
48. Nottawasaga Tp. Lougheed col.
49. York Tp. Y. P. col.
50. Lake Moira, near Madoc. Mr. Moon.
51. Richmond Hill. Alex. and Arthur Boyle.
52. Miami valley. C. J. B. Ratjen, Lawrenceburg, Ind.
53. York Co. Y. P. col.
54. Simcoe Town. S.
55. Boone Co., Kentucky U. S.
56. Pittsburg Tp. Frontenac Co. W. G. Kidd, Kingston,
57. Nottawasaga Tp. Mr. Duff.
58. Nottawasaga Tp. Herbert Connor.
59. London Tp. M.
60. Grand Bend, Sable River. M.
61. McGillivray Tp. M.
62. Bay of Quinte, (pewter or lead). Dr. T. W. Beeman (O. L.)
63. Qu'Appelle R. Valley, N, W. T. Jas. C. Stokes.
64. Dakota, U. S. (catlinite) Dr. Rear.
65. Eglinton, Y. Tp. Y. P. col.
66. Lake Medad, ("white stone.") Y. P. col.
67. Burlington Beach. Y. P. col.
68. Pacific Coast, Brit. Columbia. Y. P. col.
69. Blood Indian (modern) Rev. John McLean.
70. Modern. " "

CASE M.

MAINLY OF SLATE.

Bird Amulets.

1. 5¾ in. long and ¾ in. across middle of base, neck 2⅛ in. long and only ⅜ in. (at crown of head) above level of back. The attempt to represent a head is very simple, the neck being sloped off at about 45° a slight downward curve on the under side adding to beak appearance. Tail at widest part 1⅛ in. erected at angle and stands ⅜ in. higher than back, length of base 3 in., slightly hollowed lengthwise and a little rounded transversely. Aurora, York Co. S.

2. 3¼ in. long and ⅝ in. across middle of base, which is 2 in. long, neck erect, crown of head 1¼ in. above base, head 1⅝ in. long, beak from ⅝ in. deep in front

of eyes, to ¼ at end. Peduncled eyes, only part of one now left, tail erect and 1⅜ inches long from base. Base very slightly hollowed lengthwise, otherwise flat. No locality. S.

3. 3 in. long, head and tail erected at about 45° ; from crown to tip of beak 1 in. Peduncled eyes ¾ in. in diameter the upper portion of them rising ¼ in. above crown of head. Bar across base at each end and projecting about 3/16 below base. Thorndale, Perth Co. S.

4. 3⅛ in. long, neck erect, sharp curve forming crown of head and continuation of curve forming beak. Lower curve more circular. width of head from crown to neck 1 in. Base 1⅞ in. long, ½ in. wide and convex both ways. S.

5. 4½ in. long, neck erect, crown of head 1⅞ in. above base. Head formed as in No. 4. No tail. The original hole through rear end having been broken out, a new one has been bored coming out on the top. Base 2¾ in. long and ¾ wide, slightly convex in both directions. York Tp. (?)

[This handsome specimen was presented to the museum about three years ago. It was handed in by the gentleman who owned it, but unfortunately the record of its reception has been lost. Should the owner recognize it by the above description, or by seeing it in the case, he will confer a favor by addressing the curator.]

6. 3 5-16 in. long, the outline is similar to that of No. 4. Base 1¾ in. long and ⅝ in. wide ; convex in both directions. S.

7. 4⅝ in. long. Head and tail on line with back, except for slight depressions to form neck and flatten tail. Base 1⅝ in. long with heavy transverse bar at each end. From front bar to tip of beak is 1⅞ in. and from rear bar to end of tail 1⅛ in. The tail is 1⅝ in. wide. At the shoulders the specimen is 1¼ in. wide whence it narrows rapidly to tip of beak. Brantford. S.

8. 3 5/16 in. long, neck and head raised a little, tail depressed and pointed. Base 2 in. long, 1⅝ in. wide and barred. It is quite impossible to write an intelligible description of this singular specimen. The eyes project but have no disc. They stand out 3-16 in. from the head and terminate in a rounded end, less than ⅛ in. diameter. The material is huronite. Port Rowan. S.

9. 4⅜ in. long, neck and tail almost at right angles to body. Base 2¼ in. long and ⅝ in. wide. Tail 1⅜ wide and 1⅝ in. from base to end. The head from crown to point of beak is 2 in. and is at right angle to neck, tapering from ½ in. to 3/16. Biddulph Tp., Middlesex. M.

10. 5¾ in. long, neck and tail erect and rising ½ in. above back. Breast forms nearly a right angle with base. Tail more oblique with a central rib in continuation of sharp ridge forming the whole upper outline. Head from breast to point of back 2¼ in. Tail from base 1⅛ in. Base 3 in. long and ⅝ in. wide, concave lengthwise and concave across. Brown and purple veined argillite. London Tp., Middlesex Co. M.

11. 5½ in. long, neck rises high. Crown of head 2⅜ in. above base. Head from curve of throat to point of beak 1 in. long. Tail from base 1⅜ in. and same width as body. Base 3⅛ in. long and 13/16 in. wide, slightly convex in both directions. McGillivray Tp., Middlesex Co. M.

12. 3⅝ in. long, head above base 1⅜ in. Tail above base 1 in. and ribbed. Base 2½ in. long and 9/16 in. wide, convex in both directions. Stephen Tp., Middlesex Co. M.

13. 4¼ in. long. Head rises 1⅝ in. above base. Tail broken. Base 2¼ in. long and 13/16 in. wide, convex and twisted a little lengthwise—slightly convex across. West Williams, Middlesex Co. M.

14. 5⅛ in. long. Head and neck almost on level with back, the two measuring 1½ in. from shoulder. Tail rises 1⅜ in. above base and of same width as body. Base 3¼ in. long and 1 in. wide. Front hole in base broken and no hole at rear angle. Base slightly convex both ways. McGillivray Tp., Middlesex Co. M.

15. 3¾ in. long, broken off at tail end. Form of head similar to Nos. 5 and 6. Pale pink granite. City of London, Middlesex Co. M.

16. This specimen is in many respects of the same unusual type as No. 8, but its condition is less perfect, both head and tail being damaged. The head fracture has been rubbed down pretty smoothly and the angularities of the tail fracture have been rounded off. All that remains of the left eye indicates pedimculation but the disc is broken off. The body oval in outline, being 2 in. long and 1½ in. wide. The thickness of the body from upper to lower side is only about half an inch. The material is the striped slate of which so many are made. East Williams, Middlesex Co. M.

16½. 3¾ in long. Neck elevated, head horizontal, eyes peduncled; one broken; tail almost horizontal and depressed marginally near body. Base 1⅜ in. long 1⅛ in. wide and barred. McGillivray Tp., Middlesex Co. M.

17. 2⅛ in. long. Neck almost at right angles to body, head horizontal and crown 1¾ in. above base. Head from centre of crown ⅞ in. and from throat ⅝ in. long. Eyes peduncled, discs about 7/16 in. diameter. Tail rises only a little above horizontal. Base 1¾ in. long, 1 1/16 in. wide and barred. This specimen seems to be in an unfinished condition as the holes have not been bored through the bars. The two extremities of the front hole have merely been marked. Huronite. West Williams Tp., Middlesex Co. M.

18. 6¼ in. long. Neck rises with a gentle curve, beginning within 1 in. of tail Height of crown from base 1½ in. Head 1¼ in. long, points downwards at angle corresponding to rise of neck, it is 9/16 in. wide, about 3/16 in. thick, square pointed and edge up. Eyes peduncled and projecting about ⅜ in., discs about ½ in. diameter. Base 3½ in. long and varying in. width from 9/16 in. in front to ⅞ in behind. Tail rises at sharp angle 1¼ in above base and is ⅞ in. wide. This specimen is perfect in every respect and is admirably made. West Williams Tp. M.

19. 2¾ in. long. Crown of head same height as tail. Tail erect almost at right angle. Base 1⅜ in. long, and ¾ in. wide. Convex both ways. W. Muma, Humberstone Tp.

20. 2⅞ in. long, Neck in line with back and head pointing downwards. Crown surmounted with oval projection 7-16 in. long and 3-16 wide. Tail only a slight upward curve of back line about ⅛ in. high. Base 1½ in long and ⅝ in. wide, convex in both directions.

21. Tail fragment. McGillivray Tp. M.

22. Head and neck of bird-amulet. Peduncled eyes. One broken off. Upper edge of whole piece notched. A hole has been drilled through the neck end for secondary rise. S.

Unless where otherwise noted, all these are of striped slate, and are bored diagonally on each end at the under side.

25. 2⅜ in. long, 1 7/16 in. wide, and ⅞ in. thick in middle, decreasing at end to ¼ in. thick. Hole bored edgewise and oval, the longer diameter being on one side ¾ in., and on the other ⅝ in. The specimen is hammer shaped, but shows no signs of use on ends. All the edges are square. Slate, faintly striped. Ontario. S.

26. 3⅛ in. long, 1⅝ in. wide, and ⅞ in. thick. Ovate sidewise and edgewise. Bored One end broken. S.

27. 2⅜ in. long, 1 in. wide and 1 in. deep. Port Rowan. S.

28. 2 in. long, 1 11/16 in. wide and 1 in. thick. Oval; flattened at each end. Hole 7/16 in. diameter at one end, and ⅜ at the other, bored lengthwise. Edges of specimen rounded, and one of them bearing nineteen notches crosswise, from ⅛ to ¼ in. long. Striped slate. Western Ontario. S.

29. 1⅞ in. diameter, and 1½ in. thick, viewed from side it is perfectly circular. A hole ⅜ in. in diameter is bored through the longer axis. On one side and parallel with the hole a hollow has been formed, the greatest width of which is fully one inch. Striped slate. West Williams Tp. M.

30. 6⅜ in. long, 1½ in. wide, and 1⅛ in. thick in middle, ending in a blunt point at the extremities. All the sides are rounded smoothly, and a 7/16 in. hole is bored through greater diameter of middle. Striped slate, brown. Wingham. S. (Perfectly symmetrical in every respect.)

31. 4⅜ in. long, 1⅛ in. wide, and ⅞ in. thick. Finely rounded on all sides, and pointed at each end. A ⅜ in. hole bored through middle. This specimen is similar in shape to No. 30, but one side is less curved than the opposite. Striped slate. Norfolk Co.

32. 3⅝ in. long, 1¼ in. wide, and ⅞ in. thick, tapering to point at each end. Hole ¼ in. diameter, bored through shorter diameter of middle. Brown striped and mottled slate. Caradoc Township. M.

Winged and Horned Specimens.

33. 5 in. long across tips of curved horns which are knobbed at ends, 1⅛ in. deep in middle through which a ⅜ in. hole is bored. Not quite symmetrical. Slate; weathered. Plympton Tp. S.

34. 6¾ in. from tip to tip of horns, which are terminated in handsome oval knobs. Depth in middle 1⅜ in. Hole 7/16 in. diameter. Same type as No. 33, but smoothly finished and perfect in symmetry. Zone Tp. S.

35. 5⅜ in. from tip to tip of wings, which are flattened in line with the hole, nearly 7/16 in. in diameter in middle, which is ⅞ in. deep. The wings are curved to one side ⅝ in. beyond the centre, and on the opposite side are two projections, each about ⅞ in. from centre of hole, and extending fully the same distance beyond the body in the centre. One wing is a little longer and more pointed than the other. Light gray slate. Lake shore, Norfolk Co. S.

36. 6⅛ in. across horns, which terminate in oval knobs sharply ridged on outer surface. Depth in middle 1⅛ in. Dark striped slate. Specimen closely resembles No. 34, but has been broken across the hole and cemented. Highly finished. Forest. S.

37. 5⅞ in. across wings, which are flattened in line with hole through the middle, which is 1⅜ in. deep. The wings are about 1¾ in. wide at the broadest part, and not more than ⅜ in. thick where they join the central portion, which is flat sided and rises with sharply marked shoulders above the sides of the wings. The thickness of the central portion is less than an inch, and the hole is ⅝ in. in diameter on one side, and slightly less on the other. Brown argillite. Wingham. S.

38. 3¼ in. long, and 2½ in. wide, irregularly quadrangular. Wings full breadth —ends have been broken off and rubbed down again. This has been effected by

some one recently, as the rubbing has been done to produce a sharp edge. A squarely cut notch ½ in. deep and the same width is made on one side where the hole comes out. Hole ⅜ in. diameter at this end, and ½ in. diameter at the other. Striped slate. Port Perry. S.

39. 3¼ in. long, and 3 in. wide. One wing much damaged. Notched in middle at extremities of hole, which is about ⅜ in. diameter. One notch ¾ in. deep, and one 1 in. deep. Specimen has been broken across hole and cemented. Slate. S.

40. 4¼ by 4¼ in. Each wing forms half of a six sided figure. Notches in middle between wings 1½ inch deep. The hole has been bored through the entire width before the notches were made. Has been broken and cemented. One side of eye lost. One side of each wing injured. Wings less than ¼ in. thick. Brown slate. Y. P. col.

41. 4½ in. long, and 3 3/16 in. wide. Outline approximately oval. Hole ⅜ in. diámeter. One notch ⅞ in. deep, and one ⅝ in. deep. Notches made after boring. Wings near middle about ½ in. thick. Striped slate. Blanshard Township. M.

50. 3⅞ in. long, 3⅛ in. wide. Has been almost circular in outline when perfect. One wing broken. Notches between wings about ⅝ in. deep, and as they are ⅝ in. wide, the hole being only ⅜ in. diameter, it is not possible to tell whether they were made before or after the boring. Striped slate. Mound in Perry Co., Ohio.

43. 4⅝ inch long, and 2½ in. wide. Approximately oval in outline. Wings ⅜ in. thick near middle. No notches. Hole 7/16 in. diameter at one side, and a little over 5/16 at the other. Striped slate. McGillivray Tp. M.

44. 5¼ in. long, and 1⅞ in. wide. Outline a long oval, somewhat pointed at the ends. Hole ⅜ in. diameter. One side weathered. Brown striped slate tinged with blue. East Williams Tp. M.

45. 3½ in. long, and 2⅛ in. wide. Outline oval. Hole 3-16 in. diameter. Notches ⅝ in. deep and made after boring. At point of one wing a circular depression 7/16 in. long and ⅛ in. deep has been made. McGillivray Tp. M.

46. 3⅜ in. long, and 1⅝ in. wide. Hole 5/16 in. diameter. Two half round depressions less than ¼ in. deep take the place of notches. Wings thick in proportion to size. Ends chipped as if used for hammering. Dark striped slate. McGillivray Tp. M.

47. 4½ in. long, and 1½ in. wide. Butterfly outline. Hole on more rounded side ½ in. diameter; on the other under ⅜ in. diameter. Striped slate. East Williams Tp.

48. 5¼ in. long, and 2¼ in. wide. Outline a pointed oval. Hole ⅜ in. diameter at one end, and ½ in. nearly at the other. No notches. Striped slate. West Williams Tp. M.

49. 4⅝ in. long, and 3 in. wide. One wing is nearly an inch shorter than the other, and has been re-worked. Hole ⅜ in. diameter. Only one side notched 1⅜ in. deep. Striped slate. Biddulph Tp. M.

51. 2¼ in. long, and 1¾ in. wide. Wings triangular. Point of one broken. Hole about ⅜ in. diameter, and walls very thin. Notches ⅝ in. deep. A sharp ridge rises on the sides of the hole, and in line with it, making diameter across centre ⅞ in. This is the smallest specimen of its kind in the collection. Striped slate. Vaughan Tp. Dr. Orr, Maple.

52. In outline like a pipe, but the hole (which is oval) pierces the "head" in line with the "stem." Upper edge of what may be called stem slightly grooved in continuation of curve made by lower side of hole. Stem 2½ in. long. Upper side ⅝ in. wide at angle and tapering to ⅛ in. at point. Lower side brought to a rounded edge. Head 2⅛ in. deep, ¾ in. thick, and 1¼ in. wide in direction of stem. Hole 11-16 by 5-16 in. diameter. Brown striped slate. No locality. S.

55. Fragment of a peculiar specimen, having apparently had two large and two small incurved wings. S.

56. Fragment of horned specimen. The horn rises in a curve almost in line with the hole. Simcoe Town. S.

57. One half of specimen like No. 30. Caradoc Tp. M.

59. One half of specimen similar to No. 57. M.

Tubes.

62. 3½x1⅜x1 in. Striped slate. Forest. S.

63. 2⅞x1¼x1 in. Striped slate. Norfolk Co. S.

64. 2⅝x1¾x1⅛ in. Slate. Norfolk. S.

65. 5¾ in. long, and 1⅜ in. diameter, perfectly round. Hole ¾ in. dia. This is a fragment of what is said to have been a tube at one time upwards of a foot in length. The material appears to be a fine close-grained limestone, resembling somewhat German lithographic stone, but darker. It takes a good polish. Mr. Galbraith, the gentleman who handed it in, said he remembered seeing it when whole. Unfortunately the record of its locality has been lost. Perhaps this notice will meet the gentleman's eye.

66. 6¾x1¼x1 1-16 in. Hole ⅜ in diameter at one end and 5-16 at the other. Sides rounded. Cross section oval. Slate. Beverly Township. Miss Jessie Robertson, Valens.

67. 7⅝ in. long. Almost round and tapering slightly from ⅞ in. to ¾ in. diameter. Hole ½ in. diameter at larger end, and ⅜ at the other. Slate. S.

68. 4 in. long, and 1⅛ in. dia. at larger end, tapering to an oval of 1 in. x13-16 in. at the other end. Hole is flared at large end to nearly full dia. of tube. At small end it is also somewhat enlarged, being ½ in. dia. at the tip, and barely ⅜ in., half an inch in. The material is much like that of No. 65, but lighter in color. Wolfe Island.

69. 8½ in. long, 1⅛ in. dia. Almost perfectly round. One end slightly larger than main body, measuring nearly 1¼ in. Hole as in No. 68. Material similar, but darker in color, darker even than No. 65.

70. 3¾ in. long, ¾ in. dia. Broken. Slate. West Williams Tp. M.

71. 4½ in. long, 1 in. x 1⅜ in. dia. in middle. Sides rounded and tapering with convexity to about ⅝ in. dia. at smaller end which is broken. Hole decreases from ⅝ to ⅜ in. Striped slate. McGillivray Tp. M.

72. 5 in. long, and ¾ in. dia. Two sides flattened and two rounded. Striped slate. McGillivray Tp. M.

73. 4 in. long, and 1½ in. wide. Longitudinal fragment; shows side of hole. McGillivray Tp. M.

Bar Amulets.

20. 3⅜ in. long, 1¼ in. wide, and 1¼ deep. Cross section triangular. Bosanquet Tp. M.

21. 3¼ in long. Base 9/16 in. wide, depth ⅛ in. Boring of holes at each end incomplete. Scotland Village. S.

22. 3 in. long. Base nearly ¾ in. wide. Depth ⅞ in. Both ends fractured on upper side. St. Mary's. S.

23. 3¾ in. long ,nearly 1⅛ in. wide, and ¾ in. deep. Cross section semi-circular. West Williams Tp. M.

53. 3 in, long, ¾ in. wide, and ⅞ in. deep. Higher in middle than at ends; ends collared. No locality. Y. P. col.

24. 4¾ in. long, ¾ in. wide at ends, less in middle. ½ in. deep. McGillivray Tp. M.

74. 4⅝ in. long. Greatest dia. 1⅝ in. Hole ¾ in. dia., bored 1⅜ deep as if intended for a tube. Smaller end only about 1 in. diameter. Striped slate. West Williams Tp. M.

75. 4⅜ in. long, 1⅜ in. wide, and 1 in. thick. Sides rounded. Smaller at each end than in the middle.. Striped slate. London Tp. M.

76. 3¼ in. long, and about ⅞ in. dia. Broken at each end, Sides slightly rounded. Hole shows longitudinal markings deeply cut. Striped slate. Blanshard Tp. M.

77. 3¾ in. long, 1⅜ in. wide. One side splintered but leaving hole intact. Sides rounded. Striped slate Biddulph Tp. M.

84. Fragment of object like No. 52. This specimen is less in size than No. 52. but has been much more handsomely made. Striped slate. Biddulph Tp. M.

85. 6¼ in. long, fully 1 in. wide, and ¾ in. thick. Viewed from the edge it tapers to a point at each end. Viewed from the side the two edges are almost parallel. The ends are slightly hollowed, but the sides are perfectly flat. A ⅜ in. hole pierces it edgewise in the middle. Under side weathered, but on the whole a beautiful specimen. Western Ontario. S.

86. Similar in almost every particular to No. 85, except that the ends are more deeply hollowed. Perth Co. P. R. Jarvis.

CASE N.

GORGETS OR TABLETS—TWO OR MORE HOLES.

The specimens in cases N and O are, almost without exception, made from slate. They vary very much both in size and shape. They appear to be considerably more plentiful in the western than in the eastern portion of the province. In many instances it is easy to believe that these were worn as gorgets or breast-plates, but in other specimens, especially some of those in case N, the number and position of the holes would seem to indicate a different use. One tablet has had as many as seven holes bored through it, some of them close to the edges and now partly broken off, others near the middle, and all apparently without any regularity.

1. St. Thomas. S.
2. Fingal. S.
3. No record. S.
4. Sarnia Tp. S.
5. Galt. S.
6. Orillia. S.
7. No record. S.
8. Caradoc Tp. S.
9. Near Stratford. S.
10. No record. York P. col.
11. St. Mary's. S.
12. No record. S.
13. Near Norwich. S.
14. Exeter. S.
15. London Tp. S.
16. Pilkington Tp.
17. Plympton Tp. S.
18. No record. S.
19. Eramosa Tp.
20. Owen Sound. S.
21. No record. S.
22. No record. S.
23. No record. S.
24. No record. S.
25. West Williams Tp. M.
26. McGillivray Tp. M.
27. McGillivray Tp. M.
28. West Williams Tp. M.
29. Thedford Tp. M.
30. West Williams Tp. M.
31. McGillivray Tp. M.
32. West Williams Tp. M.
33. West Williams Tp. M.
34. McGillivray Tp. M.
35. West Williams Tp. M.
36. West Williams Tp. M.
37. McGillivray Tp. M.
38. West Williams Tp. M.
39. McGillivray Tp. M.
40. Caradoc Tp. M.
41. Biddulph Tp. M.

42. Middlesex Co. M.
43. McGillivray Tp. M.
44. Biddulph Tp. M.
45. East Williams Tp. M.
46. Biddulph Tp. M.
47. West Williams Tp. M.
48. West Williams Tp. M.
49. McGillivray Tp. M.
50. Middlesex Co. M.
51. McGillivray Tp. M.
52. Near Lindsay. S,
53. Near Lindsay. S.
54. St. Thomas. S.
55. McGillivray Tp. M.
56. Hamilton Co. O., W. K. Moorehead.
57. Stephen Tp. M.
58. No record. S.
59. No record. S.
60. No record. S.
61. No record. Y. P. col.
62. Wolfe Island, R. St. Lawrence.
63. Biddulph Tp. M.
64. No record.
65. Miami Valley, O., C. J. B. Ratjen.
66. Miami Valley, O., C. J. B. Ratjen.
67. Miami Valley, O., C. J. B. Ratjen.
68. Miami Valley, O., C. J. B. Ratjen.
69. Lee Co. Va., Ky., Geol. Sur., Frankfort.

CASE O.

GORGETS OR TABLETS—ONE HOLE.

1. Western Ontario. S.
2. Western Ontario. Notched at one end. S.
3. Imly City, Mich., U. S. S.
4. Western Ontario. S.
5. Jarvis, Norfolk Co. S.
6. Western Ontario. S.
7. Western Ontario. S.
8. Tremont Park, Tidd's Island. C. A. See.

9. Tremont Park, Tidd's Island. C. A. See.
10. Near Cobourg. S.
11. Western Ontario. S.
12. Moore Tp. S.
13. Exeter. S.
14. Near Galt. S.
15. Western Ontario. S.
16. Guelph Tp.
17. York Tp. Y. P. col.
18. Western Ontario. S.
19. Western Ontario. S.
20. No record. Y. P. col.
21. Western Ontario. S.
22. Forest. S.
23. Western Ontario. S.
24. McGillivray Tp. M.
25. Biddulph Tp. M.
26. McGillivray Tp. M.
27. London City. M.
28. West Williams. M.
29. West Williams. M.
30. McGillivray Tp. M.
31. Biddulph Tp. M.
32. Caradoc Tp. M.
33. McGillivray Tp. M.
34. Bosanquet Tp. M.
35. West Williams Tp. M.
36. West Williams Tp. M.
37. Middlesex Co. M.
38. McGillivray Tp. M.
39. McGillivray Tp. M.
40. McGillivray Tp. M.
41. McGillivray Tp. M.
42. Biddulph Tp. M.
43. McGillivray Tp. M.
44. Caradoc Tp. M.
45. Blanshard Tp. M.
46. West Williams Tp. M.
47. McGillivray Tp. M.
48. Biddulph Tp. M.
49. Stephen Tp. M.

50. West Williams Tp. M.
51. Humberstone Tp. Wilson.
52. Weston, Ontario. S.
53. Weston, Ontario. S.
54. Weston, Ontario. S.
55. Tremont Park, Tidd's Island. C. A. See.
56. Tremont Park, Tidd's Island. C. A. See.
57. Weston, Ontario. S.
58. Wolfe Island.
59. Wolfe Island.
60. Victoria Co. Dickson col.
61. Wolfe Island.
62. McGillivray Tp. M.
63. No record.
64. Caradoc Tp. M.
65. Nottawasaga. Lougheed col.
66. Miami Valley. Dr. Craig, Lawrenceburg, Ind.

CASE P.

COPPER AND HEMATITE.

Hematites.

1. 2¼ x 1⅛. Hartford city, Mason Co., West Virginia. W. K. Moorehead.
2. 3⅛ x 2⅛. Locust Creek, Linn Co., Mo. Dr. Rear, Toronto.
3. 2⅝ x 1⅝. Brookfield, Mo. Dr. Rear.
4. Brookfield, Mo. Dr. Rear.
5. Linn Co., Mo. Dr. Rear.
6. Sinker or plummet 1¼ x ⅝ in. Near Columbus, O., C. D. Pettibone, Cincinnati, O.

Native Copper.

1. Chisel with socket for handles. Total length 4⅜ in. Width at lip 1¾ in. Manitoulin Island. Mr. Yellowlees.

2. Axe 4½ in. long, 2¼ in. wide at lip, and tapering to 1½ in. at head. Greatest thickness about ⅜ in. Brantford. S.

3. Axe or chisel 4 in. long, 2¾ in. wide at lip, and tapering to ⅝ in. at head. Greatest thickness 5/16 in. Tremont Park, Tidd's Island, Gananoque. C. A. See.

3. Axe or chisel, 6 in. long, 1¼ in. wide at lip, and tapering with convex sides to ⅜ in. at head. Greatest thickness ¼ in. Beverly. J. Humphrey, Troy.

5. Spear-head 6½ in. long, 1 in. at widest, and about 5/16 in. thick in middle. Has tine for insertion in handle.

6. Spear-head, 7⅛ in. long, and 1⅝ in at widest, with tine 2 in. long. Greatest thickness of blade 3/16 in. Brantford. S.

7. Spear-head, or knife, 4 in. long. Widest part of blade 1 1/16 in. Greatest thickness ⅛ in. Has a neck for attachment to handle. Neck ½ in. long with a projection at each lower angle to aid in holding place in shaft. Rice Lake. S.

8. Spear-head with socket. Total length 5¼ in. Blade 3 in. long, ⅞ in. at widest part. and ⅛ in. thick. Near Toronto. S.

9. Spear-head or knife 5⅝ in. long with tine. Greatest width of blade ⅞ in. and about ⅛ in. thick. No locality. S.

10. Fragment of knife, 2¾ in. long. No locality. S.

11. Knife with tine. Total length 3¾ in. Blade 2 in. long and 1 in. wide—thinned on one edge only. No locality. S.

12. Knife with tine. Total length 7⅜ in. Blade 5¼ in. long. Greatest width 1 3/16 in., and although thinned on both edges, has only one made to cut. The cutting edge is convex as the result of the greater thinning, and the back is correspondingly hollow. The shape of this knife is suggestive of a European model. Beverly. James Rae.

13. Bracelet, 2 in. dia., and from ⅛ in. to 3/16 in. thick. Cross section a flattened oval, the longer dia. being in the plane of the circle. Rice Lake. S.

14. Bracelet and fragment; sheet copper coiled in tubular form and bent. No locality. Y. P. col.

15. Spear-head with tine. Total length 5⅝ in. Blade 4 in. long, 1 in. at widest, ⅛ in. thick, and smoothly finished to double edges. Tine round. London Tp. M.

16. Spear-head with small socket. Total length 9 in. Blade 7½ in. long, 1⅝ in. at widest, and ⅛ in. thick. Burford. M.

17. Axe or chisel, 4⅝ in. long. Thinned at both ends. One end roughly so, as if for insertion in a handle. Width of lip 1½ in., of handle end 1¼ in. Greatest thickness ¼ in. This specimen contains a speck of native silver. Biddulph. M.

18. Axe or chisel, 5¼ in. long. Width at lip 1⅝ in., tapering to ⅜ in. at head. Greatest thickness ¼ in. Noncon Island, Lake Scugog. A. F. Chamberlain.

19. Bead ⅝ in. long and ⅜ in. dia. Has been bent to form a hole. London City. M.

20. Nine copper heads on piece of hide as attached originally. Tremont Park, Tidd's Island.

21. Pendant, triangular 2¼ in. long. Eye at wide end, which is 1 in. wide Wolfe Island.

22. Small bead, coiled, 5/16 in. long, and ⅛ in. dia. Caradoc. S.

23. Double-pointed awl or needle 4⅛ in. long; 3/16 in. dia. in middle.

24. Half of button, 1½ in. dia. Mound, Ross. Co., Ohio. W. K. Moorehead.

25. Spear-head' 6⅛ in. long, tined, ⅞ in. at the widest, and about 3/16 in. thick. A strong rib forms the centre of the blade on each side. Dr. Beeming, Perth. (O. L.)

26. One hundred and four copper beads from ⅛ in. to ½ in. dia., and three pendant spikes about 3 in. long. Pike's Farm, Wolfe Island.

27. Spike or spear 12½ in. long, ¾ x ⅝ in. in middle, and tapering to flat points at each end. Sides square North bank of River Kaminstiquia at Fort William. Capt. J. S. Smith.

28. Axe or adze with socket. Total length 5½ in. Width at lip 2½, at end of socket 3⅜ in. The edges are turned almost the whole length to form the socket, but 2 in. from the lip the material is flattened by "shouldering" to form a blade. This implement has the *appearance* of having been made in a swage. North bank of Kaminstiquia River at Fort William. Capt. J. S. Smith.

29. Axe 6¼ in. long, with beaver-skin in which it was wrapped. Pt. Mamainse, Lake Superior.

30. Spike; round; 8¾ in. long, ⅝ in. wide. Pointed at one end and chisel-edged at the other. Near London, Ont.

CASE Q.

Mostly of Unknown Use.

1. Fifteen brown stone beads from half an inch to three inches long. York P. col.

2. String of blood-stone beads. Y. P. col.

3. Five brown stone beads. Y. P. col.

4. Six blood-stone beads. Beverly Tp. Dwyer col.

5. Eight brown stone beads. Nottawasaga Tp. Lougheed col.

6. Five brown stone beads. Beverly Tp. Dwyer col.

7. One large brown stone bead. Beverly Tp. Dwyer col.

8. One large brown stone bead. Saskatoon, N.W.T. M.

9. Five blood-stone beads. Nottawasaga Tp. Lougheed col.

10. Circular, thin and flat brown slate, nearly 1 in. dia. with eight small holes round margin, one larger than the others as if used for suspension—one small hole in centre. Nottawasaga Tp. Lougheed col.

11. Small flat brown stone pendant (?) Nottawasaga Tp. Lougheed col.

12. Steatite bead, two fragments of steatite objects and one of limestone. Wolfe Island.

13. Hawaiian sling-stone, Helia, Oahu, Sandwich Isles. St. Mary's Institute, Dayton, O.

14. Carved head, perhaps a wolf's; limestone. Nottawasaga Tp. Lougheed col.

15. Finely carved human head 1¼ in. long. Beverly Tp. Dwyer col.

16. Bird's head and neck, broken from some large object. Nottawasaga Tp. Lougheed col.

17. 1¾ in. long, profile of beaver in blue slate. Nottawasaga Tp. Lougheed col.

18. Profile of quadruped in brown slate about 1½ in. long. Nottawasaga Tp. Lougheed col.

19. Circular, conical (with flattened apex) striped slate 1¾ in. dia. and 1⅛ in. high. Burford Village. S.

20. A hollowed conical stone 2½ in. dia. and 1¼ in. deep outside measurement Outside smooth and shows a laminated structure. Bottom of hollow smoother than sides. Near Woodstock. S.

21. Light blue slate depressed cone; 2¼ in. dia. and 1⅛ in. high. Not hollowed. "God's Country," Hamilton Co., O. W. K. Moorehead, Washington. D. C.

22. A light oval (pumice-like) stone 2¾ in. long, 2¼ in. wide and 1 in. thick in middle. A 5/16 in. hole goes through the centre, sidewise. McGillivray Tp. M.

23. Slate implement 5½ in. long and from 1½ to 2 in. wide. Thin and shaped like a knife blade. One end fractured within ¾ in., of which a small oblique hole is bored. Withrow Avenue, Toronto.

24. Perhaps a "slick-stone"; slate. Caradoc Tp. M.

25. Perhaps a "slick-stone." No locality. S.

26. Pointed instrument of slate 5¾ in. long, roughly rounded and tapering to a narrow chisel point ⅛ in. wide. Greatest dia. about ⅝ in. Large end broken. Tremont Park, Tidd's Isl. C. A. See.

27. Fragment of pointed weapon 5⅞ in. long, two sides rounded and smooth, two flat and rough. Large end broken. Dia. at large end 1 in. S.

28. Dark slate 6¼ in. long and ⅝ x ⅜ in. in middle. Three sides flat, one rounded. Tapers to blunt point at each end. Norfolk Co. S.

29. Striped slate 4⅜ in. long, 1 in. wide and ¾ in. thick in middle. Three sides nearly flat and slightly convex lengthwise. Fourth side much rounded and bevelled towards each end. With flat side up has a square-ended canoe look. West Williams. M.

30. Light colored striped slate 5¼ in. long, much like No. 29 except that the bevelled side is not rounded transversely. Two holes 1⅞ in. apart, and 1¼ in. from each end, have been bored from the straight to bevelled side. Dia. on upper side 5/16 in. and on lower side barely ⅛ in. East Williams Tp. S.

31. Dark striped slate, 4¾ in. long, similar in outline to Nos. 29 and 30, but deeper in proportion to length, and deeply hollowed from end to end. Two holes are bored through the hollowed and opposite sides, one 1¼ in. and the other 13/16 from the end. Holes have been bored from both sides. Nissouri Tp. S.

32. Light brown double horned or winged stone, 2½ in. long—with a groove surrounding the middle. Boone Co., Ky.

33, 34, 35, 36, 37 and 38 are similar in outline, although of different kinds of stone. They are from 2 in. to 3¼ in. long, flat, with two rounded sides terminating in points. No. 34 differs from the others in having two holes through it. Except No. 37, these all came from Noncon Isl., L. Scugog. A. F. Chamberlain.

No. 37 is from Tremont Park, Tidd's Island. C. A. See.

39. Small light blue slate pointed implement. Tremont Park, Tidd's Island. C. A. See.

40. Pointed slate implement with notched end as for a string. The point was broken off when being taken out of the mound. Tremont Park, Tidd's Island. C. A. See.

41. Small slate object like No. 52, case M. Newmarket. S.

42. Plummet-like stone, 2¾ in. long and 1⅜ in. dia. Egg-shaped with small knot at one end. McGillivray Tp. M.

43. A black pebble grooved. This is a doubtful specimen, as the groove is apparently the result of weathering on a soft micaceous vein. Victoria Co. Dickson col.

44. Half of a notched stone. The specimen is oval and the notch is cut a little obliquely round the longer diameter. Miami Valley, O. Dr. Craig, Lawrenceburg. See No. 90.

45. Small brown pebble 1⅜ in. long and ½ in. wide with notch cut round the middle. Aurora, Ind. J. L. Kassebaum, Aurora, Ind.

46. Water-worn pebble 3 in. long and 2¼ in. wide, hollowed. The hollow has probably been deepened artificially, and the specimen may be called a paint-mill, or paint-cup. Miami Valley. Dr. Craig, Lawrenceburg, Ind.

47. Small limestone paint cup (?) Miami Valley. Dr. Collins, Lawrenceburg, Ind.

48. Limestone paint cup (?) West Williams Tp. M.

49. Slate 4¼ in. long and ⅝ in. wide, ⅛ in. thick, ends broken. Victoria, Brit. Columbia. Jas. Johnson, Vancouver.

50. Fragment of a slate implement. Victoria, Brit. Columbia. Jas. Johnson, Vancouver.

51. Cast of the Cincinnati Tablet. Robt. Clarke, Cincinnati, O.

52. Cast of the Clarke Tablet. Waverly, O. Robt. Clarke, Cincinnati, O.

54. Mottled slate 8¼ in. long, nearly 1½ in. wide in middle, where it is also ⅝ in. thick. At each end it is ½ in. thick. Between the middle and ends it is reduced in beautifully regular curves on one side to ⅜ in. The same side is smoothly rounded transversely, making a sharp angle with the lower side, which is very smooth and perfectly straight. Cobourg. S.

55. Brown stone bead. Nottawasaga. Herbert Conner.

56. Three brown stone beads. Nottawasaga. Lougheed col.

78. Round and tapering fragment of stone implement 5⅝ in. long. Greatest dia. 1⅛ in. McGillivray Tp. M.

79. Black slate 4⅜ in. long, ⅝ in. wide, ⅜ in. thick, three sides flat, one rounded both ways. Ends thin. Caradoc Tp. M.

80. Striped slate 5⅝ in. long and 9/16 thick. Pointed; one side flat, others rounded. 2¾ in. from point is a portion 1¾ in. long, 1½ in. wide and ¾ in. thick, forming a flattened bulb. Near Hamilton, Butler Co., O. W. K. Moorehead.

81. Brown veined slate 6 in. long, 1⅝ in. wide in middle, whence it decreases by curved sides to ⅝ in. wide at each end. About ⅜ in. thick. One side flat, on which 1¾ in. apart and equi-distant from the centre, lengthwise, are the beginnings of two holes. Shelby Co., O. Prof. Moritz Fischer, Frankfort, Ky.

82. 5⅛ in. long, similar to No. 81. (No holes). Mason Co., W. Virginia. W. K. Moorehead.

83. Gray slate, 4⅞ in. long. Dia. at widest 1 in. and at thickest ¾ in. Resembles No. 80, but is pointed at both ends and the bulb is more elongated. Point of longer end broken. Near Hartford, Mason Co., W. Virginia. W. K. Moorehead.

84. Dark veined slate, 5¾ in. long, 1 in. wide and ⅞ in. thick in middle. Three sides flat, one rounded and bevelled to each end. A shallow groove goes round two adjoining sides. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

85. Brown slate $3\frac{5}{8}$ in. long. Greatest dia. $1\frac{3}{4}$ in. $2\frac{3}{8}$ in. from widest part to one end, may be regarded as the body of some animal. The other end is the unfinished head and neck. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

86. Granite, 3 in. long. Much like No. 31. One end broken. The one hole remaining has been bored from the hollowed side. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

87. Sandstone, $2\frac{3}{4}$ in. long, $2\frac{1}{8}$ in. wide and $\frac{1}{4}$ in. thick in middle. Oval. Edge has twenty-two deep sharply angular notches. Hole through smaller end. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

88. Quartzite, 2 in. long, $1\frac{1}{2}$ in. dia. Plummet-like. No knob on smaller end. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

89. Conglomerate, $2\frac{1}{8}$ in. long, $1\frac{1}{8}$ in. dia. Plummet-like. Grooved round small end to form knob. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

90. Sandstone, $2\frac{1}{4}$ in. long, $1\frac{3}{4}$ in. wide and $1\frac{1}{4}$ in. thick. Flat on one side. The rest of the surface rounded. A groove along the rounded side in the direction of longer axis. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

91. Close-grained, mottled, argillite. $6\frac{1}{4}$ in. long, 1 in. wide and $\frac{5}{8}$ in. thick at largest. Tapers on two sides to a chisel point at one end, and on three sides to a pick-point at the other. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

92. Slate, $5\frac{3}{4}$ in. long, $1\frac{1}{2}$ in. wide at one end and $\frac{1}{2}$ in. wide at the other. About $\frac{1}{4}$ in. thick. Edges rounded. Hole bored 1 in. from small end. Large end bevelled from both sides to an edge. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

With the exception of the beads, it is impossible in the present state of knowledge to give suitable names with certainty to the objects in this case. Many of them also are indescribable for want of space.

CASE R.

CLAY PIPES

1. Nottawasaga. Lougheed col.
2. Nottawasaga. Lougheed col.
3. Highland Creek. Y. P. col.
4. Lake Medad.
5. Nottawasaga. Lougheed col.
6. Eramosa.
7. Beverly. Dwyer col.
8. Nottawasaga. Lougheed col.
9. Nottawasaga. Lougheed col.
10. No record. Y. P. col.
11. Beverly. Dwyer col.
12. No report. Y. P. col.
13. No report. Y. P. col.

14. Beverly. Dwyer.
15. Nottawasaga. Lougheed col.
16. Nottawasaga. Lougheed col.
17. No record. Y. P. col.
18. Forest. S.
19. Holland Landing. S.
20. Nottawasaga. Lougheed col.
21. Vaughan.
22. No record. Y. P. col.
23. Nottawasaga. Lougheed col.
24. Ste. Marie. Simcoe Co.
25. Beverly. Dwyer col.
26. Beverly. Dwyer col.
27. Nottawasaga. Lougheed. col. (2)
28. Nottawasaga. Lougheed col. (2)
29. Nottawasaga. Lougheed col.
30. Nottawasaga. Lougheed col.
31. Nottawasaga. Lougheed col.
32. Orillia. L. Hayden, Toronto.
33. York Tp. B. Jackes, Toronto.
34. Beverly. Jas. Rae.
35. Beverly. Jas. Rae.
36. No record.
37. York Tp. B. Jackes, Toronto.
38. Near Lake Simcoe. S.
39. Nottawasaga. Lougheed col.
40. Nottawasaga. Lougheed col.
41. No record. Y. P. col.
42. Nottawasaga. Lougheed col.
43. No record. Y. P. col.
44. No record. Y. P. col.
45. Nottawasaga. Lougheed.
46. No record. Y. P. col.
47. Onentisati. Simcoe Co.
48. Nottawasaga. Lougheed col.
49. Orillia. Basil R. Rowe.
50. No record. Y. P. col.
51. No record. Y. P. col.
52. No record. Y. P. col.
53. York Tp. B. Jackes.
54. Nottawasaga. Lougheed col.

55. Eglinton, York Tp. Y. P. col.
56. Eglinton, York Tp. Y. P. col.
57. Eglinton, York Tp. B. Jackes.
58. Nottawasaga. Lougheed col.
59. Onentisati. Simcoe Co.
60. No record. Y. P. col.
61. Ste. Marie. Simcoe Co.
62. York Tp. B. Jackes.
63. McGillivray Tp. M.
64. Nottawasaga. Lougheed col. (3)
65. Lake Medad. C. Macpherson.
66. Onentisati. Simcoe Co.
67. Beverly. Dwyer col.
68. Penetanguishene. F. A. Benson.
69. York Tp. B. Jackes.
70. No record. Y. P. col.
71. Nottawasaga. Lougheed col. (2)
72. Ste. Marie. Simcoe Co.
73. Victoria Co. Dickson col.
74. Victoria Co. Dickson col.
75. Victoria Co. Dickson col.
76. No record. Y. P. col.
77. No record. Y. P. col.
78. No record. Y. P. col.
144. Lambton Mills, York Tp.

CASE S.

CLAY PIPES.

79. York Tp. J. Kirkwood.
80. Nottawasaga. Lougheed col. (Owl's head from lip of bowl.)
81. Nottawasaga. Lougheed col. (Human face, open mouth.)
82. Nottawasaga. Lougheed col. (Human face.)
83. Nottawasaga. Lougheed col. (Human face.)
84. Nottawasaga. Lougheed col. (Human face.)
85. Nottawasaga. Lougheed col. (Human face, elongated.)
86. Nottawasaga. Lougheed col. (Human face, elongated.)
87.
88. Nottawasaga. Lougheed col. (Human face.)

89. Onentisati. Simcoe Co. (Eagle's head on lip.)
90. Beverly. Jas. Rae. (Snake's head.)
91. Nottawasaga. Lougheed col. (Owl's head.)
92. Nottawasaga. Lougheed col. (Two human faces from bowl.)
93. Nottawasaga. Lougheed col. (Spiral coil round bowl.)
94. Nottawasaga. Lougheed col.
95. Nottawasaga. Lougheed col. (2 birds' heads from pipes.)
96. Near L Simcoe. S. (Double human face, forward and backward.)
97. Nottawasaga. Lougheed col. (Human face.)
98. Nottawasaga. Lougheed col. (Square mouth.)
99. Onentisati. Simcoe Co. (Square mouth.)
100. Ste. Marie. Simcoe Co. (Square mouth.)
101. Nottawasaga. Lougheed col. (Square mouth.)
102. Nottawasaga. Lougheed col. (Square mouth.)
103. Nottawasaga. Lougheed col. (Square mouth.)
104. Nottawasaga. Lougheed. col. (Square mouth.)
105. Lake Medad. C. Macpherson. (Square mouth.)
106. Victoria Co. Dickson col.
107. Victoria Co. Dickson col.
108. Victoria Co. Dickson col.
109. Ancaster. J. E. McCrimmon. (Human form, head broken.)
110. Nottawasaga. Lougheed col. (Fox's head ?)
111. York Tp. George Miller.
112. York Tp. George Miller.
113. York Tp. George Miller.
114. Nottawasaga. David Melville.
115. Nottawasaga. Ed. Coyle. (Human face.)
116. " " "
117. Nottawasaga. Thos. White. (Fragment diagonally marked on upper edge.)
118. Nottawasaga. David Melville. (Oval curve.)
119. Nottawasaga. David Melville. (Stem of pipe like 118.)
120, Nottawasaga. David Melville.
121. Nottawasaga. David Melville. (Square mouth.)
122. Nottawasaga. David Melville. (Square mouth.)
123. Nottawasaga, David Melville.
124. Nottawasaga. Lougheed col. (Human face elongated,)
125. Nottawasaga. David Melville.
126. Nottawasaga. David Melville.
127. Nottawasaga. Mr. Doner.
128. Nottawasaga. Herbert Conner. (Square mouth.)
129. Nottawasaga. Dugald Currie.
130. Nottawasaga. Thos. White.
131. Nottawasaga. Thos. White.

132. Nottawasaga. Thos. White.
133. Nottawasaga. Lougheed col. (Human figure, broken.)
134. " " " "
135. Lake Medad. Mr. Lillycrop. (Human face from pipe.)
136. Nottawasaga. David Melville. (Human face from pipe.
137. Nottawasaga. Herbert Conner.
138. Nottawasaga. Lougheed col.
139. Victoria Co. Dickson col.
140. Nottawasaga. Lougheed col. (Dog's head.)
141. Lake Medad. Luke Mullock.
142. Nottawasaga. Herbert Conner.
143. Nottawasaga. Herbert Conner.
144. (See case R.)
145. Lake Medad. Luke Mullock.
146. Nottawasaga. Thos. White. (Human face.)
147. Humberstone Tp. Cyrenius Bearss. (Small.)
148. Humberstone Tp. Cyrenius Bearss.
149. Humberstone Tp. Cyrenius Bearss.
150. Humberstone Tp. Isaac Bearss.
151. Dumfries Tp. Jas. G. Caven.
152. York Tp. Geo. Miller.
153. Amberly Tp. Wm. Welsh. (Square mouth, fragment.)
154. Tremont Park, Tidd's Islands. C. A. See. (Stem.)
155. Eglinton, York Tp. W. G. Long. (Long stem.)
156. Nottawasaga. Snake head. Angus Buie.

This case contains also a large number of stems from various localities.

CASE T.

Discs.

1 to 6. Six discoidal stones (varying from 2½ to 3½ in. in diameter) said to have been used in playing a game by rolling them along the ground, opponents aiming missiles at them when in motion, and bets being made as to where they would stop, or which side would lie uppermost. Dr. Craig, Lawrenceburg, Ind.

7 to 12. Six small discoidal stones. The smallest ⅝ of an in. in diameter and the largest 2½. No. 9 is marked by four lines cut on both sides, crossing each other near the centre and extending to the margin. Geo. Lougheed, Nottawasaga.

12½ and 13. Two stones apparently in preparation for discs. Originally they were water-worn, but there are evidences of manipulation by pecking on the flattened sides. Dr. Craig, Lawrenceburg, Ind.

14 Rude or unfinished disc. Both sides hollowed as if to aid in grasping. Edges of stone not circular. Natural Hist. Soc. Brookville, Ind.

15. Discoidal stone, 4 in. in dia., well hollowed on both sides. S.

16. Discoidal stone unfinished ; 3¾ in. dia., sides hollowed, but periphery not made quite circular. From New York State. Moses Barrowman, Buffalo.

17. Small discoidal stone 1¾ in. dia., hollowed on both sides. From Ohio, U.S. Nat. Hist. Soc. Cincinnati, O.

18. Discoidal stone 2¼ in. dia., hollowed on sides. S.

19. Discoidal stone, 2¼ in. dia., flat sides. "Used in a Hawaiian game—the object being to see who could roll it furthest on a smooth path." The specimen is interesting as being so like many found in Canada and the United States. Hawaii, Sandwich Islands. Rev. Bro. Joseph, St. Mary's Academy, Dayton, O.

20. Discoidal stone 2½ in. dia., sides flat. Ste. Marie, Simcoe Co., Ont.

21 to 25. Discoidal stones, 1¼ in. to 1½ in. dia., sides flat, 21 and 25 perforated in the centre. From York Tp. W. G. Long, Lansing, York Tp.

26. Discoidal stone, 1½ in. dia.. sides convex. From West Virginia, U. S. Nat. Hist. Soc. Brookville, Ind.

27. Discoidal stone, 1½ in. dia., sides flat. Perforated. From Goose Lake, near L. Simcoe. S.

28. Discoidal stone, 2½ in. in dia., both sides concave. Miama Valley, near Lawrenceburg. C. J. B. Ratjen, Lawrenceburg, Ind.

29. Discoidal stones, 2⅛ in. in dia., both sides deeply concave. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.

30. Discoidal stone, 2 in. in dia. Edge much rounded, both sides hollow. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.

31. Discoidal stone, 2 in. in dia., sides hollow. Same locality. C. J, B. Ratjen, Lawrenceburg, Ind.

32. Discoidal stone, 1⅝ in. in dia. This specimen differs from all the other hollow sided ones on account of the cavities not merging imperceptibly into the rounded edge. The rounding of the edge is carried ⅜ of an inch over the side and nearly an eighth of an in. deep, so as to form a sharply defined collar, the central portion being but slightly hollowed. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.

33. Discoidal stone. 1½ in. in dia. ⅜ in. thick. So deeply hollowed on both sides that the thickness in the middle is barely ⅛ of an inch. C. J. B. Ratjen, Lawrenceburg, Ind.

34. Discoidal stone. 1⅞ in. in dia. ⅞ in. thick. Flat on both sides. Nottawasaga.

35. Disc; clay. 1⅛ in. in dia. ⅜ in. thick. Eglinton, York township. Loug. collection.

Nos. 1 to 4, and 12½ to 16 are classified by some as hammers, a few of these may have been used thus, but others show no signs of such application. Nos. 1, 3, 12½, 13 and 16 retain their original ovate form as viewed from the flattened or hollowed sides.

36 to 40. Discoidal stones from 1 in. to 3 in. dia. Nottawasaga. David Melville.

41 to 44. Discoidal stones from 1 in. to 1½ in. dia. Nottawasaga. William Melville.

RUBBING STONES.

1 and 2. Rubbing stones, roughly circular, flat and smooth on both sides, 5 in. dia. Orillia. Basil Rowe.

PESTLES.

3 to 6. Rudely formed pestles from 5 to 7 in. long; cross section oval West Middlesex. M.

7. Pestle, 7 in. long. McGillivray Tp. M.

8. Pestle, 13 in. long, and 2½ in. dia. in middle. Has a small hole bored in one side near the middle. Simcoe. S.

9. Pestle, 10 in. long and 2½ in. dia. Simcoe. S.

10. Pestle, 8 in. long, and 2 in. dia. W. Middlesex. M.

11. Pestle, 12 in. long and 2 in. dia. McGillivray Tp. M.

12. Pestle, 8½ in. long, 2¾ in. dia. No locality. Y. P. col. (This may not be more than a water-worn stone.)

13. Pestle, 4¾ in. long and 1½ in. dia. Ft. Gratiot, Mich.

14. Pestle, 5¼ in long, conical; diameter of base 2½ x 3¼ in.; of head, 1¼ in.; it is worn off on the face or base end at an angle. No locality. Y. P. col.

15. Pestle, 4½ in. long and 2½ in dia.; is a little flared at base; upper end or head rounded off. Kentucky. Geological Survey of Kentucky, Prof. Moritz Fischer.

16. Pestle, 3½ in. long, conical; diameter of base 2½ in., tapers to 1 in. Shelby Co., Kentucky. Nat. Hist. Soc., Brookville, Indiana.

17. Pestle, 5¼ in. long, conical; dia. of base 3 in.; head rounded. Linn Co., Missouri. Dr. Rear.

18. Pestle, 6½ in. long, base broken. Humberstone Tp. Cyrenius Bearss.

CASE U.

GROOVED STONE AXES AND HAMMERS.

1 Axe, 8 in. by 4¾ in., grooved all round. Lake Superior. Y. P. col.

2. Axe, 6¾ in. by 4 in. one edge ungrooved. Bourbon Co., Ky. Kentucky Geological Survey, Frankfort.

3. Axe, 7¼ in. by 4 in., one edge ungrooved. Miami Valley, Ind. C. J. B. Ratjen, Lawrenceburg, Ind.

4. Axe, 6 in. by 3 in., Aurora, Ind., one edge ungrooved. J. L. Kassebaum, Aurora, Ind.

5. Axe, 7½ in. by 2½ in., one edge ungrooved. Miami Valley. C. J. B. Ratjen, Lawrenceburg.

6. Axe, 5 in. by 4 in., one edge ungrooved. No locality. Y. P. col.

7. 5¼ in. by 3 in, one edge ungrooved and hollowed lengthwise. Linn Co., Missouri.

8. Axe, 5 in. by 3 in., one edge ungrooved. Shelby Co., Ind. Nat. Hist. Soc., Brookville, Ind.

9. Axe, 5 in. by 3½ in., one edge ungrooved. Franklin Co., Ind. Nat. Hist. Soc., Brookville, Ind.

10. 5 in. by 2¾ in., one edge ungrooved and hollowed lengthwise. Miami Valley. Dr. Craig, Lawrenceburg, Ind.

11. Axe, 4¼ in. by 3 in., one edge ungrooved. Garrard Co., Ky. Nat. Hist. Soc., Brookville, Ind.

12. Axe, 7 in. by 3½, grooved all round. Miami Valley, Ind. Dr. Craig, Lawrenceburg.

13. Axe, 7 in. by 3 in., grooved all round. East Williams Tp. M.

14. Axe, 5½ in by 2¾ in., grooved all round. McGillivray Tp. M.

15. Axe, 5¾ in. by 3 in., grooved all round. West Williams Tp. M.

16. Axe, 6 in. by 4¼, grooved all round. Near Weston Village. Dr. Richardson.

17. Axe, 7½ in. by 3¼, grooved all round. Arkona. M.

18. Axe, 6 in. by 3½ in., grooved all round. W. Middlesex. M.

19. Axe, 5¼ in. by 4½ in., grooved all round. Linn Co., Mo.

20. Axe, 5½ in. by 2¼ in., grooved all round. Miami Valley. Dr. Craig, Lawrenceburg.

21. Axe, 5 in. by 2¾ in., grooved all round. Miami Valley. Dr. Craig, Lawrencebnrg.

22. Axe. 4 in. by 3 in., grooved all round. J. C. Kassebaum. Aurora, Ind.

23. Axe, 3¾ in. by 2¾ in., grooved all round. Shelby Co., Ky. Nat. Hist. Soc., Brookville, Ind.

24. Axe, 4 in. by 2¼ in., grooved all round. McGillivray Tp. M.

25. Axe, 3½ in. by 2½ in., grooved all round. Brookfield, Mo.

26. Axe, 3 in. by 2 in., grooved all round. East Williams Tp. M.

27. Axe, 4½ in. by 3 in., grooved all round. McGillivray Tp. M.

28. Axe, 4¾ in. by 2¾ in., grooved all round. No locality. Y. P. col.

29. Axe, 5¼ in. by 3¼ in., grooved all round. No locality. Y. P. col.

30. Axe, 6¼ in. by 3½ in.. chiefly grooved on the two edges. McGillivray. M.

31. Axe, 6¼ in by 3¼ in., groove shallow all round. No locality. Y. P. col.

32. Axe, 6 in. by 3½ in., grooved chiefly on edges. No record.

33. Axe, 3¼ in. by 2½ in., one edge ungrooved. Shelby Co., Ky. Brookville Nat. Hist. Soc, Ind.

34. Axe, 3¾ in. by 1¾ in., one edge ungrooved. Brookfield, Mo.

35. Axe, 3 in. by 2 in., thin and slightly grooved. Linn Co., Mo.

36. Axe, 4¼ in. by 2¼ in., very slightly grooved, and mainly on the edges. Shelby Co., Ky. Brookville Nat. Hist. Soc. Ind.

37. Axe, 5½ in. by 2¾ in., grooved mostly on edges. No record.

38. Axe, 6 in. by 3 in., grooved all round. No record.

39. Axe, 7½ in. by 4¼ in., grooved all round with stony projections formed on edges above and below groove. No record.

40. Axe, 6¾ in. by 4½ in., similar to No. 39. No record.

41. **Hammer,** 7¼ in. by 5½ in. Lake Superior.

42. Hammer, 6½ in. by 3½ in. Is evidently only a water-worn stone whose shape has suggested use, and has been slightly hollowed in two sides either for attachment to a handle, or to aid in holding directly in the hand.

43. Hammer, 6 in. by 4 in. 45 miles north-west of Brandon, Man. Is deeply grooved and well shaped. M.

44. Hammer, 5 in. by 4½ in., cylindrical and grooved near the middle. Point Edward. M.

45. Hammer, 6¾ in. by 4½ in., grooved about one-third from smaller end. Leamington, Essex Co.

46. Hammer, 5¾ in. by 3¾ in. Has originally been a fine implement—is now broken on one side of each end. Thunder Bay.

47. Hammer, 3 in. by 3 in., grooved near the middle. Thunder Bay.

48. 5½ in. by 5 in Is a flat water-worn stone. Has originally been somewhat ovate and has now two deeply cut notches on the edges 1¾ in. from the smaller end. Point Edward. M.

49. 8 in. by 5½ in. Corresponds in character to No. 48. Biddulph. M. Neither of these bears any marks to indicate use as a hammer. Perhaps they were used as anchors for the frail birch-bark canoes close to shore. The fact, however, that the latter was found inland, does not add force to this conjecture, unless the same use was made of it for river purposes.

CASE V.

POTTERY.

This case contains a large number of pottery fragments, illustrative of markings or patterns. The specimens are from various parts of this Province and United States. The principal contributors are: Jas. Dickson, P. L. S., Fenelon Falls; Jas. Dwyer, Beverly; T. H. Hulbert, Duluth; Cyrenius Bearss, Humberstone; John McPherson, Toronto; Dr. T. W. Beeman, Perth; F. A. Benson, Port Hope; William Welsh, Amberley; Society of Natural History, Cincinnati; Prof. J. L. Deming. Technological Institute, Boston; Thos. White, Nottawasaga; Jas. Rae, Beverly; W. J. Long, Lansing; Albert Lougheed, Nottawasaga; G. Laidlaw, of "The Fort"; David Boyle, sr., Richmond Hill, J. L. Kassebaum, Aurora, Indiana; and C. Bell, Toronto.

The finest specimen is that presented by Mr. John McPherson. It consists of several pieces now cemented, and shows the outline and proportions of what must have been a very handsome vessel about 9 in. high, 7 in dia. at the widest part, and 5 in. in dia. at the mouth. It was found in Mr. McPherson's island, Mindemoya, in a lake of the same name in Manitoulin Island.

CASE W.

Clearville Specimens.

This case contains specimens of horn, bone, shell, clay and stone from the site of a fortified village at Clearville, Kent Co., Ont.

18 deer-horn prongs, showing rude human workmanship,

30 bone awls or needles, from 1½ in. to 7 in. long.

2 dorsal spines of a large fish. These are about 1½ in. long, triangular in cross section and very sharp.

1 beaver's tooth.

2 muskrats' teeth.

10 unio valves, some of these have been used as scrapers, and one evidently by a left-handed person.

1 walnut.

9 clay pipe-stems.

6 pipe heads, but all imperfect. One is very rude in form, and one is remarkable for its fine finish and design.

3 pieces of burnt clay, showing manipulation.

7 fragments of large and coarse clay vessels.

19 fragments of smaller and finer vessels.

8 rudely made stone chisels.

8 roughly chipped flints.

7 stones, smoothly rubbed.

1 piece of red jasper.

1 sinker—so called.

1 semi-circular, grooved stone.

CASE X.

Drills.

1. Drill, 2 in. long, broken, T head. Curtis Farm, Linn Co., Mo. Dr. Rear. Toronto.

2. Drill, 2 in. long, unsymmetrical, rounded head. Bourbon Co., Ky. Dr. Collins, Lawrenceburg, Ind.

3. Drill, 1⅛ in. long, T head. Bourbon Co., Ky. Dr. Collins, Lawrenceburg, Ind.

4. Drill, 2¼ in. long, notched head, seems to have been an arrow modified for drilling purposes. Middlesex Co., Ont. M.

5. Drill, 2¼ in. long, broken, head merely a little broader than body and thinner at end. Curtis Farm, Linn Co., Mo. Dr. Rear, Toronto.

6. Drill, 1¼ in. long, rude, head smaller than body.

7. Drill 1 in. long, half of head broken off crosswise.

8. Drill 1¾ in. long, rounded head.

9. Drill 1⅜ in long, notched head. Outline like arrow, but is flat on one side and round on the other, body comparatively thick, and curved considerably at the point. Nos. 6, 7, 8, and 9, from Pike's Farm, Wolfe Isl.

10. Drill, 3⅛ in. long, T head, body rhomboidal, and twisted. McGillivray Township, Middlesex, Ont. M.

11. Drill, 2⅞ in. long, head broken.

12. Drill 2¼ in. long, head a slight expansion of body, and thinned.

13. Drill 2 in. long, point broken, sharply cut T head.

14. Drill 1⅝ in. long; head like a T double barred, the upper portion being the lesser in size. Nos. 11, 12, 13 and 14, from Townships of East and West Williams. Middlesex Co, M.

15. Drill, 3⅜ in. long; no marked head, one side of body comparatively flat, curved near the point; greatest width (at head end) ⅝ in. Pike's Farm, Wolfe Island.

16. Drill, 1 in. long, obscure T head, point broken.

17. Drill, 1¾ in. long, obscure T head, body curved diagonally, the material is dark blue for half the distance at the head end, the other half being white.

18. Drill, 1¼ in. long, head broken. } Both seem as if made for being inserted
19. Drill, 1¼ in. long, head wedged. } and fastened in a cleft handle.

20. Drill, ⅞ in. long, T head, sharply pointed. Nos. 16, 17, 18, 19, and 20, from Miami Valley, Ind. Dr. Craig, Lawrenceburg.

21. Drill, 1¾ in. long, 1 in. wide in middle; drilling portion only ⅜ in. long, and ¼ in. wide at point; notched neck for fastening to handle ⅝ in. long.

22. Drill, 1⅜ in. long, broken; unsymmetrical T head.

23. Drill, ¾ in. long, broken; good T head.

24. Drill, 1⅛ in. long, T projection, ⅞ wide near middle; notched neck for handle.

25. Drill, 2¼ in. long, ¾ in. wide, obscure neck; roughly chipped; may have been a badly made arrow-tip.

26. Drill, 2⅞ in. long, point broken, ¼ in. wide at break; T head.

27. Drill, 2⅜ in. long, neck broken, ⅝ in. at widest part; might have been an arrow, but is worn smooth on sides and edges.

28. Drill, 3 in. long, notched neck; slightly curved; flat on one side.

29. Drill, 2¾ in. long, imperfect, oblique T head.

30. Drill, 2⅞ in. long, club-shaped head; tip broken.

31. Drill, 2⅜ in. long, ½ in. wide; neck broken; white flint.

32. Drill, 1½ in. long, ⅜ in. wide; head broken.

(21 to 32 from collection presented by Jas. Dickson, Esq., Fenelon-Falls.)

33. Drill, 1⅝ in. long, ½ in. wide; thick, and rudely chipped: notched with T head.

34. Drill, 1⅝ in. long, ⅜ in. wide; slightly curved and rudely made; head appears to have been broken.

35. Drill, 1¼ in. long; otherwise like No. 34.

36. Drill, 2⅜ in. long, ⅜ in. wide; point broken; club-shaped head.

37. Drill, 2 in. long, flat on one side and slightly curved; obscure neck; rude.

38. Drill, 3⅞ in. long, 1¼ in. wide in front of neck; for ⅔ of length from head is as flat as an arrow, but takes rhomboidal form near the point, decreasing to ¼ in. in width at the same distance from tip.

(33 to 38 from counties of Wentworth and Waterloo.)

39 to 76. These were procured from Mr. C. J. B. Ratjen, of Lawrenceburg, Indiana, and were all collected in the Miami Valley. They vary from 1 in. to 4½ in. long, and from ⅛ to 1⅛ in. in width. Some are T headed, others club-headed, and many are simply thinned for insertion in a handle. There is no notched specimen among them.

72 and 73, both impertect, are serrated on the edges, which are now worn as if the specimens had been used as saws. 42, 43, and 44, may have been arrow-tips, but all the others were no doubt drills.

CASE Y.

SLATE WEAPONS.

These objects are shaped like arrow and spear heads. Some writers regard such specimens as knives. They were probably rather of an ornamental character and intended for purposes of display in connection with feasts, dances, and other celebrations, They are not very common in this country.

1 to 3. Western Ontario. S.

4. Broad in proportion to length, being 5 in. long, (including the neck, 1½ in.,) and 2¾ in. wide at the base; it is squarely shouldered to form the neck. Wolfe Island.

5. 4¼ in, long, 2 in. wide, and very thin; slightly barbed; the neck is of a kind peculiar to this class of object, being carefully notched or serrated on each edge as if to assist in binding to a shaft. Another peculiarity is that the neck although ⅝ in. long, measures 1⅛ in. behind the barbs and tapers to ⅝ in. at the base. This shape would seem to add to the difficulty of fastening. S.

6. 2¾ in. long, with neck similar to No. 5. Caradoc Tp. S.

7. 3¼ in. long, square-shouldered, neck which is tapering like Nos. 5 and 6, but not serrated. S.

8. 2¾ in. long, neck broken. S.

9. 2¾ in. long, deeply barbed, tapering and serrated neck.

10. 3⅜ in. long, very perfect, square-shouldered, tapering and round edged neck. Nottawasaga. Lougheed col.

11. 3¾ in. long, single barbed, neck tapering and round edged. Withrow Avenue, Toronto.

12. 3⅜ in. long, slightly barbed, with nearly parallel-sided and square-edged neck. S.

13. 4¼ in. long, very slightly barbed, neck parallel-sided and square-edged. S.

14. 3½ in. long, deeply barbed; neck broken partly off; round-edged. Nottawasaga. Lougheed col.

15. 5 in. long, sharp rib along middle, barbed; neck slightly tapering and round- edged. S.

16. 2⅛ in. long, barbs broken; has the appearance of having been bored on each side to form neck. Wolfe Island.

17. 3½ in. long, square-shouldered; tapering, round-edged neck. Downie Tp. P. R. Jarvis.

18. 1⅞ in. long, slightly barbed. This small specimen is exceptional in the form of the neck, for although serrated, it is somewhat wider below than above. Lakefield. R. Q. Dench.

19. 4 in. long, considerably mutilated. S.

20. 3½ in. long; is a fragment of some tool or weapon; one side slightly convex, and the other strongly ribbed. Lambton Mills. Wardie and Ottie White, Toronto.

In this case are also:—

1. 11 in. long, 1⅝ wide, and ¾ in. thick; sides convex and corners rounded; one end is square and blunt, and measures 1⅛ in. wide, the other is thinned to an edge and is only ⅝ in. wide. On one side is a scratched figure like a capital T, the lower end of the upright stroke being forked, and on the opposite side a similar mark but with a bar across the middle of the upright. Arkona. S.

2. 11⅜ in. long, 1¼ in. wide, and ¾ in. thick; one end 1 in. wide, and chisel-edged; the opposite end ½ in. wide, thinned and rounded. West Williams Tp. M.

3. 8⅝ in. long, 1⅜ in. wide, and ⅞ in. thick; one end 1 in. wide, thinned, but blunted as if from use. The opposite end terminates in a rounded point about ⅜ in. diameter. Point Edward.

4. 11¾ in. long, 1⅛ in. wide, and 1⅛ in. thick; tapering to both ends, one of which is ¾ in. wide, and the other 5/16 in., both are chisel-edged. Chief Smith. Brantford.

Axe of striped slate, 6¼ in. long, and 3⅜ in. across the mouth. Looked at sidewise it has the appearance of an elongated pear· Richmond, Indiana.

CASE Z.

MISSCELLANEOUS.

1. Smoothly rubbed stone. A. W. Reavley.
2. Flint. A. W. Reavley.
3. " "
4. " "
5. " "
6. " "
7. Stone axe. Wm. Michener. Humberstone.

8. Bone awl or needle. Wm. Melville.
9. " " "
10. " " "
11. Clay pipe " "
12. " "
13. " "
14. " "
15. " "
16. " "
17. " "
18. " "
19. " "
20. " "
21. " "
22. " "
23. Stone tablet "
24. Small notched bone or needle. Wm. Melville.
25. Small discoidal stone. Wm. Melville.
26. " " "
27. " " "
28. " " "
29. Several pipe stems, stone "
30. Small bone chisel. David Melville.
31. Worked bone "
32. Small stone axe "
33. Small discoidal stone "
34. " " "
35. " " "
36. Discoidal stone, 2¼ in. dia., with hole in centre. David Melville.
37. Clay pipe. David Melville.
38. " "
39. " "
40. " "
41. " "
42. Pipe stems "

All those from No. 8 to No. 42 are from Nottawasaga Tp.

43. Small discoidal stone, with hole in centre and groove round outer edge. York Tp. Jos. Smelser.

CASE A2.

MISCELLANEOUS.

1. Pipe head. Lambton Mills. Wardie and Ottie White.
2. “ broken. Lambton Mills. W. and O. White.
3. String of glass beads. “ “ “ “
4. “ and shell beads. Lambton Mills. W. and O. White.
5. Pipe-stem. Lambton Mills. W. and O. White.
6. Bear's tooth (bored). Lambton Mills. W. and O. White.
7. Diagonally notched bone. “ “ “ “
8. Carved fragment of bone, (probably of European origin). Lambton Mills. W. and O. White.
9. Small hollowed stone. Lambton Mills. W. and O. White.
10. Two broken shell beads. Lougheed col.
11. Small, flat stone, perforated. “
12. Stone in preparation for beads. “
13. Bear's tooth (notched). Lougheed col.
14. Stone axe. Sebastopol Tp. Alex. Parks.
15. Gouge. Golden Lake, Algora Tp. Alex. Parks.
16. Stone axe. Brantford. P. R. Jarvis.
17. “ N. Easthope. “
18. “ Ellice Tp. “
19. “ “ “
20. “ N. Easthope. “
21. “ (grooved). Ellice Tp. P. R. Jarvis.
22. Gouge. P. R. Jarvis.
23. Belt ornament, sheet copper. P. R. Jarvis.
24. Pottery fragments. Delaware Tp. P. R. Jarvis.
25. Shell ornaments (2). P. R. Jarvis.
26. Clay pipe. Zorra Tp. “
27. “ “ “
28. “ “ “
29. Red stone bead. Saugeen. P. R. Jarvis.
30. Spoon; Sioux (buffalo horn). “
31. Bone chisel. Near Battleford, N. W. T. Major J. M. Delamere.
32. Pipe from grave near Stony Lake, N. W. T. Major J. M. Delamere.
33. Copper kettle. North-west of Battleford, N. W. T. “
34. Slate 5⅝ in. long, 4 in. wide, and 1⅝ in. at thickest. Oval hole (long dia. 1 in.) in middle, from side to side. Outline much like the McCallum pipe, and suggestive of a monkey. May have been intended for a large pipe. Nottawasaga. Angus Buie.
35. Fragment of stone pipe; head showing a fairly well cut human face ⅝ in long, above and behind which is a dog's head neatly cut. The latter is only half an inch long, and about the same breadth across the forehead, but the eyes, ears, mouth and nostrils are imitated. Nottawasaga. Angus Buie.

36. Pipe-head (snake) somewhat like No. 90 in case S. Nottawasaga. Angus Buie.

37. Human head from pipe-head. Nottawasaga.

38. Plain clay pipe. Ellice Tp.

39. Small pipe, like modern N. W. type. Nottawasaga. Angus Buie.

This case contains also 47 flints from various places in Perth Co.

All the articles in cases Z and A2 are placed there only temporarily, until a re-arrangement of specimens in other cases will afford room for them.

WALL CASE 1.

POTTERY.

1. Small cup, edges broken. Beverly Tp. Dwyer collection.

2. Small cup, almost perfect. Beverly Tp. Dwyer collection.

3. Plain vessel, moulded in grass basket. Humberstone. Cyrenius Bearss.

4. Small spoon-like specimen. Nottawasaga. Lougheed collection.

5 to 42. Very fine specimens of clay vessels, entire or nearly so from mounds in Arkansas. From the collection of C. W. Riggs, Cincinnati.

43. Small and imperfect cup. York Tp. Dr. R. Orr, Maple.

WALL CASE 2.

1 to 13. Iron tomahawks from various localities.

14. Copper kettle. Algora Tp., Renfrew Co.

15. Pyrula perversa from ossuary. Penetanguishene.

16. Pyrula perversa. No locality.

17. Pyrula perversa from ossuary on Cape Hurd.

18. Pyrula perversa from ossuary in Humberstone Tp. Mrs. Barney, sr.

19. Pyrula perversa from ossuary in Nottawasaga. Angus Buie.

20. Pyrula perversa from ossuary in Nottawasaga. Angus Buie.

21. Wooden war club, modern.

22. Wooden war club, made to represent a hand grasping a ball, modern.

23 to 34. Iron tomahawks of various patterns and from various localities.

WALL CASE 3.

CRANIA.

1 to 55. From ossuary, on the Keffer farm. Vaughan Tp.

WALL CASE 4.

CRANIA.

1 and 2. No record.
3. Withrow Avenue, Toronto. E. A. Macdonald.
4. Beverly Tp. Dwyer col.
5 and 6. Withrow Avenue, Toronto. E A. Macdonrld.
7 to 12. Humberstone Tp.
13 to 28. Nottawasaga Tp.
19 and 20. Withrow Avenue, Toronto.
21. Upper half containing portions of beaver skin and pieces of cedar bark. Beverly Tp.
22. Withrow Avenue, Toronto.
23 to 32. Ridley and Bury farm, Clearville, Orford Tp.
33. South Bay, Manitoulin Island. R. Baskerville, Manitowaning.

WALL CASE 5.

Contains nearly 400 stone axes and chisels of various dimensions, from two inches to upwards of one foot in length, also 14 iron tomahawks.

WALL CASE 6.

Contains about 1,000 arrow and spear heads from different parts of Canada and the United States.

Six iron tomahawks.

A large number of pottery fragments from Miller's farm, York Tp., and a quantity of miscellaneous material.

MORTARS OR MILLS.

1. Victoria Co. Dickson col.
2. York Tp. S.
3. Vaughan Tp. Dr. Orr, Maple.
4. York Tp. contains four cavities.

MODERN SPECIMENS.

Blood Indian. N. W. Territory.

1 Leather belt, beaded.
1 Pair woman's leggings, beaded.
1 " man's leggings, beaded.
2 " large breast buttons ; beaded.
4 Paint bags, one containing paint, beaded.
1 Pair large moccasins, beaded.
1 " child's " "
1 Tom-tom.
1 Large wooden pipe stem, plain.
1 " " beaded.
1 Kooie stick ; handle beaded.
1 Hammer ; long handle, beaded.
1 Whip ; handle beaded.
1 "Medicine" bag of buffalo hide.
1 Hunting knife.
1 Leather cartridge pouch.
1 Scalp, with lock of hair.
3 " locks.
1 Fire-steel attached to thong.
1 Signal hand-glass in richly beaded bag.

These were presented by Rev. John McLean, M.A., Ph. D., Moosejaw, N. W. T.

Arouay Indian. British Guiana.

1 Man's head-dress.
1 Wooden club.
1 Blow-gun.

1 Bundle of small arrows or darts for use in the blow-gun.
1 Bow.
1 Bundle of arrows.
1 Fan.
2 Spears.
1 Woman's dress.

These were presented by Mr. M. M. Fenwick, B.A., Head Master, High School, Bowmanville.

WALL CASE 7.

ESKIMO.

1. Skin of harp-seal.
1. Child's coat, fur.
3. " trousers, fur.
4. Pair of mitts, fur.
5. " shoes "
6. " boots "
7. Man's coat, "
8. Woman's coat, "
9. Man's coat with hood, fur.
10. Bed, fur.

On wall—

11. Snow shovel; wood and bone.
12. Snow stick.
13. Walrus spear.
14. Whale line.
15-16. 2 seal lines.
17. Model of kayak.
18. " " frame.

These were presented by Mr. F. F. Payne, of the Meteorological Observatory, Toronto.

19. Model of Kayak. Mr. John Notman, Toronto.

CARIB.

From Nevis, St. Kilts, Barbados and other West Indian Islands.

1 Stone club head.
1 " celt or axe.
4 " pestles.
1 Shell celt.
2 " gouges.

These were presented by Mr. Connell, of Nevis, W. I.

BIBLIOGRAPHY

OF THE

ART AND ARCHÆOLOGY OF THE ABORIGINAL TRIBES

OF THE

DOMINION OF CANADA AND NEWFOUNDLAND.

II.

By A. F. Chamberlain, M.A.

tu **Abbot, Charles C., M.D.**—Primitive Industry, or illustrations of the handiwork in stone, bone and clay of the native races of the Northern Atlantic seaboard of America. Salem and Cincinnati, 1881. 8vo. VI., 560.

Describes (p. 64) woman's knife used by Eskimo of Cumberland Sound. Describes (pp. 408-9) charm and ornament of Eskimo of Cumberland Sound, after Kumlein. See Kumlein, L.

c **Allen, J. Romilly, F. S. A. Scot.**—Notes on Fire-Producing Machines. Proc. Soc. of Antiquaries of Scotland. Vol. VII. (N. S.), 1879-80 (Edinburgh, 1880), pp. 229-249.

Describes (p. 233) process of fire-making by Chinooks of British Columbia ; p. 239 figure of Esquimaux cord-drill apparatus, with description of its working (240); p. 241 figure of Esquimaux bow-drill from Ft. Anderson, with description ; p. 249 figure of Esquimaux steel now in Edinburgh museum.

u **Archæological Journal.** Published under the auspices of the Archæological Institute of Gt. Britain and Ireland. Vol. XVIII. (London, 1861),

Contains (p. 374) brief note on fragments of pottery found beneath a pine tree near the Great (? Grand) River, Canada.

u ———Vol. XXIV (1867),

Contains (p. 76) notice of flint arrowheads from the extreme west coast of N. Canada.

Barrie "Advance" [Newspaper], June 28, 1888.

Describes skeletons and other remains found at Cameron's Point, Lake Simcoe. [Title and description from Mr. A. F. Hunter, B.A.]

Bawtree, Ed. W., M.D.—Indian Sepulchral Pits in Canada. Edinburgh New Philosophical Journal, Vol. XLV. See Squier, E. G.

Describes ossuaries, etc., in Simcoe county, Ontario.

cu BELL, CHAS. N.—Die Mound-Builders von Canada. Verh. der Berliner Gesellschaft für Anthrop. Ethnol. und Urgeschichte. Bd. 18 (1886), s. 192-194.

Describes mounds in the Lake Winnipeg region, near Lake Traverse, and a group of mounds near St. Andrews. See Toronto *Mail*, Feb. 22, 1886.

u ————Remains of Prehistoric Man in Manitoba. Report of British Assoc. of Adv. of Science, 26th meeting, Birmingham, 1886. (London, 1887), pp. 845-6.

General ideas on mounds and camp-sites.

———Mounds in Manitoba. American Antiquarian and Oriental Journal, Vol. IX. (1887), p. 300.

Short note. Brief general description.

cu BELL, ROBERT, M D., LL.D.—Observations on the Geology, Mineralogy, Zoology and Botany of Labrador Coast, Hudson's Strait and Bay. Geol. and Nat. Hist. Survey of Canada, A. R. C. Selwyn, LL.D., Director. Report of Progress, 1882-3-4.

Description (p. DD. 30) of old Eskimo camp at Port de Boucherville. Description (p. DD. 32) of ancient Eskimo works (camp, etc.,) at Port La Perrière (Digges Island).

c BOAS, DR. FRANZ.—On certain Songs and Dances of the Kwakiutl of British Columbia. Journal of American Folk-Lore, Vol. I. (1888), pp. 49-64.

Notes (p. 50) insruments and ornaments used by dancers; carved bones used in games (p. 51).

cu———Sagen der Eskimos von Baffin Land. Verhandlungen der Berliner Gesellschaft für Anthrop. Ethnol. und Urgeschichte. Bd. xx. (1888), s. 398-405.

Describes (402-404) the "Tornit" (pre-Eskimo population), their weapons (403), old stone houses (403-4), etc., according to legend.

c ———Indian skulls from British Columbia. Trans. New York Acad. of Science, 1888-9. VII., pp. 4-6.

c ———Notes on the Snanaimuq. American Anthropologist, Washington. Vol. II., (1889), pp. 321-328.

Describes (p. 323) mortuary customs of the Snanaimuq Indians of British Columbia.

* ————————The Houses of the Kwakiutl Indians, British Columbia. From Proceedings of U. S. National Museum, 1888, pp. 197-213.

An elaborate treatise on the structure, ornamentation, etc., of the houses of the Kwakiutl Indians from personal observations made during a lengthened stay (1886-7) in British Columbia. The information given is of the highest value in determining the relations of the British Columbian and other Canadian and American Indians. The paper is illustrated by figures as follows: 1, Model of a Kwakiutl house, Fort Rupert, B. C., (p. 197); 2, Ground plan of Kwakiutl house (198); 3, Front elevation (198); 4, Longitudinal section (199); 5, Carved settee in a house at Qumta'spe, Hope Island (200); 6, View of rear part of house in Qumta'spe (201); plate, view of village of Qumta'spe (facing p. 202); 7-8, Carved uprights in Kwakiutl house (203); 9, Carved upright (204); 10, Heraldic column of the Gens Sentlae, Alert Bay (205); 11, Sun mask (204); 12, Gables of houses at Alert Bay (206); 13, Heraldic column at Qumta'spe (207); 14, Post in house in Qumta'spe (208); plate (facing p. 208), Painting on front of house at Qumta'spe (Hope Island); 15, House front in Qumta'spe (210); 16 17, Uprights in house at Qumta'spe (211); 18, Statue on house at Alert Bay (212); 19, Statue in house at Qumta'spe (212); plate (facing p. 212), Front of house at Alert Bay; 20, Post in house at Comox (213); 21, Base of 20 enlarged.

At pp. 209-210 is an interesting account of the famous copper plates.

* ———The Central Eskimo. [Extract from the Sixth Annual Report of the Bureau of Ethnology]. Washington 1888. pp. 399-669.

This, perhaps the most important work that has ever appeared dealing with the Canadian Eskimo (those inhabiting Baffin Land, the western shore of Hudson Bay, the region of Boothia, Felix and Back River, Smith Sound, etc.), is invaluable to the archæologist and ethnographer. It describes the distribution of the various tribes (419-470); Hunting and fishing (471-516); Manufactures, implements, etc., (516-526); Boats and sledges (527-538); Habitations and dress (539-561); Social and religious life (561-615); Tales and traditions (615-643); Science and the arts (643-658); Glossary of Eskimo words (659-662); Eskimo geographical names with equivalents (662-666); Appendix, Notes (667-669.) Accompanying the texts are two large folding maps, one showing in detail the geographical divisions of territory occupied by the Eskimo tribes of North Eastern America, the other showing the territory occupied by the Eskimo tribes of North America, with boundaries. The full-page plates are as follows: Map of Cumberland Peninsula, drawn by an Eskimo (p. 643); Eskimo drawings (pp. 648, 650, 651). Eskimo carvings (pp. 652, 653); Modern implements (654). The work is also elaborately illustrated with 157 figures (the last four of which are Eskimo maps) of hunting and fishing implements, weapons, boats, sledges. houses, tents, dress and ornaments, gaming implements, etc.

u Bogge, Ed. B., R. N.—The Fishing Indians of Vancouver's Island. Memoirs of Anthrop. Soc., London. Vol. III. (1867-8-9), pp. 260-5.

Describes method of fishing of Songish tribe, p. 260-262; of Tahtoosh or Cape Flattery Indians, 262-263; of Ahousad tribe, 263; head-flattening, 263; amusements, dances and games, 264; burial, 265.

* Bompas, Rt. Rev. William Carpenter, D.D.—Diocese of Mackenzie River (Colonial Church Histories). London, 1888. 8vo., pp. 108.

Describes (pp. 40-41) houses, dress, etc., of Tenni tribes; tents of Tukudh (43); rafts, canoes, snowshoes (44); Eskimo face ornaments (46); pipe (47); carving, (47); dwellings, tents, etc. (48, 49); tools, fire-making, etc. (50). Chapter IX. (pp. 90-100) treats of dress and habits; dress (90); tattoo (91); ornaments (91); burial (91-92); stone implements (92); cooking (93); Eskimo fish-hooks (94); cradle-bags (95).

Boyle, David.—Work and Play among the Indians. III. School Work and Play. Toronto. Vol. I., No. 6 (March 15, 1889), p. 6.

Describes (with illustrations) Indian pipes. Figures of "McCallum" pipe in shape of monkey, from Halton county; "Beecroft" pipe of bloodstone, from Nottawasaga; "McKnight" pipe of Marble from Beverley township, and a pipe from British Columbia.

cutl———Archæological Report. pp. 9-59 of Annual Report of Canadian Institute. Session 1887-8. Being part of appendix to the report of the Minister of Education, Ontario, 1888. Published by order of the Legislative Assembly. Toronto, 1889. pp. 1-59, with 84 figures.

pp. 11-12 enumeration of Canadian specimens added to the museum; pp. 20-22, clay pipes from Glenhuron, Nottawasaga, Lambton; pp. 23-28, stone pipes from Frontenac, McGillivray, Lake Moira, London township, Hope Bay (Wiarton), West Williams township, Nottawasaga; pp. 28-40, implements of stone from McGillivray. Scugog Island. W. Middlesex, Nottawasaga, Brandon (Man.), Point Edward (Ont.), Biddulph. Toronto, Wolfe Island, West Williams, Vaughan, Ft. McLeod; p. 40, Eskimo bone figures and measure; pp. 40-41, shell gorget, London (Ont.); pp. 41-45, flints from Wolfe Island, Fenelon Falls, etc.; p. 46, carved stone head from Beverley township; pp. 48-50, copper beads from Wolfe Island, Tidd's Island, chisels from Biddulph, Burford, London townships; pp. 51-53, types of recent iron axes from Nottawasaga, Toronto, etc.; pp. 54-59, Contributions towards a Bibliography of the Archæology of the Dominion of Canada and Newfoundland.

cut Bressani, J.—Relation Abrégée de quelques Missions des Pères de la Compagnie de Jésus dans la Nouvelle France, par le R. P. F. J. Bressany, de la même Compagnie. Traduit de l'Italien et augmenté d'un avant-propos, de la biographie de l'auteur, et d'un grand nombre de notes et gravures, par le R. P. F. Martin de la même Compagnie. Montréal, 1852.

Chapter III. (pp. 66-78) treats of the "Sol, Nourriture, Vêtement et Caractère des Sauvages de la Nouvelle—France"; Burial customs and rites of the Hurons, 101-103; Notes on Wampum, 301-302. The work contains p. 50 "Tabula Novæ Franciæ anno 1660," and (p. 280) "Carte de l'ancien pays des Hurons," besides numerous engravings. pp. 330-333 are taken up with explanatory notes on the maps and engravings. On p. 101 is a note relating to an ossuary discovered near Penetanguishene in 1846, and on p. 333, references to the ruins of Ft. Ste. Marie on the Wye.

c BRINTON, D. G., M. D.—Lenâpé Conversations. Journal of American Folk-Lore, Vol. I. (1888), pp. 37-43.

Conversations with Rev. A. S. Anthony, a Canadian Delaware Indian. Notes on weapons, 38-39; utensils, 39; boats. 40; houses, 50; games, and implements used in them, 40; hooks, 41; sweat lodges, 41; trephining, 41.

BRITISH COLONIAL Newspaper, Sept. 24, 1847. [Title from Squier].

See Squier.

cut BROWN, MRS. W. W.—Some indoor and outdoor Games of the Wabanaki Indians. Proc. and Trans. Roy. Soc. of Canada, 1888, Sect. II., pp. 41-46.

tu CANNIFF, WILLIAM, M.D., M.R.C.S.E.—History of the settlement of Upper Canada, with special reference to the Bay of Quinte district. Toronto, 1869. I.-XXI., 1-671.

Notes (p. 380) site of Indian village at Cataraqui; battle ground (p. 393); island scene of massacre (407).

u CARTAILHAC, M,—Kjoekkenmöddings de l'Amérique du Nord par le Dr. Charles A. White (Prof. de Géol. à l'Univ. de l'État d'Iowa (États-Unis). Congrès internat. d' Anthrop., et d' Archéol. préhistoriques. Compte-Rendu de la cinquième session à Bologne, avec planches et figures interc. dans le texte. Bologne 1873. pp. 379-391.

Notes briefly (p. 380) kitchen midden at St. Margaret's Bay, Nova Scotia, pp. 390-391. Bibliography of Shell-heaps. See White, Dr. Charles A.

cut CHAMBERLAIN, A. F.—The Archæology of Scugog Island. 1889. 2 pp. [Reprint from the Port Perry *Standard* of March 7, 1889, p. 2].

Describes graves, and camp or village site, on Noncon Island (part of Scugog Island), Lake Scugog, Ontario county, Ontario, with specimens obtained therefrom.

cut———Contributions towards a Bibliography of the Archæology of the Dominion of Canada and Newfoundland, pp. 6. [Reprint from Report of Canadian Institute, 1887-8, pp. 54-9. See Boyle, D.].

c ———Notes on the history, customs and beliefs of the Mississagua Indians. Journal of American Folk-Lore. Vol. I. (1888), pp. 150-160.

Describes (p. 154), method of fishing; p. 155, gathering and drying rice; p. 156, manufactures.

tu CHAPPELL, LIEUT. EDWARD, R.N.—Narrative of a Voyage to Hudson's Bay in his Majesty's ship Rosamond, containing some account of the North-East coast of America and the tribes inhabiting that remote region. London, 1817.

Notes (p. 61) circles of loose stones at Eskimo fire-places; description of an Eskimo burial place; body found by Capt. Sterling in 1813, together with bows, spear, harpoon, etc., p. 111; Eskimo canoes pp. 55-57; bow, p. 70; throwing-stick, p. 101; list of articles illustrating the manners and customs of the natives of N. W. (?) coast of America, brought to Europe by Commander Billings, pp. 254-255. (Appendix E).

u ———Voyage of His Majesty's ship Rosamond to Newfoundland and the southern coast of Labrador, etc. London, 1818.

Cut of Micmac wigwam, p. 59 ; Micmac wigwams described, 74-75 ; Esquimaux winter huts, 101 ; Mountaineer sledges, 106 ; Red Indians, 169-187 (170-178, from Whitbourne) ; canoes, 174 ; bark kettles, 175.

u CHIMMO, COMMANDER W., R. N.—A visit to the North-East coast of Labrador during the autumn of 1867. Journ. of Roy. Geog. Soc., London. Vol XXXVIII. (1868), pp. 258-281.

Notes on Eskimo dress, p. 273 ; Eskimo graves at Hopedale, 278.

u DAWKINS, PROF. W. BOYD—The Range of the Eskimo in Space and Time. Report of Proc. of Brit. Assoc. Adv. Science. Fifty-fourth meeting (Montreal, 1884). London, 1885.

Brief abstract of paper, p. 898.

u DAWSON [Sir], JOHN WILLIAM, M.A., LL.D., F.R.S., F.G.S.—Acadian Geology. The geological structure, organic remains and mineral resources of Nova Scotia, New Brunswick and Prince Edward Island. Third edition. London, 1878. Supplement to second edition of Acadian Geology, containing additional facts as to the geological structure, fossil remains, and mineral resources of Nova Scotia, New Brunswick and Prince Edward Island. London, 1878.

Beds of shell, pp. 17-18 ; Micmac remains, 18-19.

cu———On a specimen of Aboriginal Pottery in the museum of the Natural History Society of Montreal. Canadian Naturalist and Geologist and proceedings of the Natural History Society of Montreal. Vol. IV (1859), pp. 186-190 (with figure, p. 188). Article is signed " J. W. D."

Describes earthen vessel found on lot 4, 8th range of lots in Clarendon township, in July, 1859, together with stone enclosure.

cu———Notes on Aboriginal Antiquities recently discovered in the island of Montreal. *Ib.* Vol. V. (1860), pp. 430-449. Article is signed " J. W. D."

Describes (pp. 432-434) skeletons, skulls (with figure, p. 433) ; remains of articles of food, 434 ; earthen vessels, 434-5 with 6 figures on p. 435 ; tobacco pipes, 435 (with figure of clay pipe, p 436) ; other earthen objects, 435-436 ; bone implements, 436-437 (with figure of awl, p. 437) ; iron implements, 437 (with figure of knife) ; historical importance of discoveries, 437-49 ; plan of Hochelaga from Ramusio. 446.

cu———Note on Relics of the Red Indians of Newfoundland, collected by Mr. Smith McKay and exhibited to the Natural History Society (of Montreal). *Ib.* Vol. V. (1860), pp. 462. Signed " J. W. D."

Describes briefly portion of Walrus tooth, 3 flat pendants of some material, shells, wampum, perforated shells, part of iron knife, hatchet, stone arrowhead, found in a sepulchral cave in the southern part of Newfoundland, with the remains of a body wrapped in birch bark.

cu———Additional Notes on Aboriginal Antiquities found at Montreal. *Ibid.* Vol. VI. (1861), pp. 362-373. Signed "J. W. D."

Treats of articles found on site of Indian village, near Metcalfe St., Montreal. Human remains, pp. 364-369 ; beads and wampum, 369 (with 2 figures); bone implements, 369-370 (with 3 figures); pipes, 370-371 (with 2 figures); earthen vessels, 371-372 (with 1 figure); stone implements, 372 ; metallic articles, 372 ; articles of food, 373.

cu———Notes on Indian Beads presented to the Natural History Society by James Robb, Esq., Mining Engineer. *Ibid.* Vol. VI. (1861), p. 471. Signed " J. W. D."

Describes beads of native copper found in an old burying-place on a small island in the St. Lawrence, near Brockville, Ont.

---

cu DAWSON, GEO. M., L.L.D., F.G.S.—Sketch of the Past and Present condition of the Indians of Canada. Canadian Naturalist and Geologist, New Series, Vol. IX. (1881), pp. 129-159.

cu———On the Haida Indians of Queen Charlotte Islands. Appendix A. of Report on the Queen Charlotte Islands. Geological Survey of Canada, A. R. C. Selwyn, Director. Report of Exploration and Surveys. Report of Progress, 1878-1879. Montreal, 1880, pp. 103-171.

> Describes ornaments, pp. 106-109 ; plate of houses and carved posts at Kumshewa village, 114 ; plate of carved posts, houses, etc., 115-116 ; shell-currency, 135 ; burial customs, 132-133 ; arts and architecture, 137-147 ; marks, 138-139 ; carved sticks, 139 ; dishes and vessels, 140-141 ; stone mortars, etc., 141 ; spoons, dishes, etc., 142 ; adzes, hammers, 143 ; spears, hooks, 144 ; canoes, 145 ; houses, 146 ; pots, 148-149 ; 2 plates of houses and carved posts, 146-147.

cu———Note on the occurrence of Jade in British Columbia and its employment by the natives. With quotations and extracts from a paper by Prof. A. B. Meyer, on Nephrite and analogous minerals from Alaska. Canadian Record of Science, Vol. II (1887), pp. 364-378. Also Reprint of the same, pp. 1-15.

> Describes (pp. 365-6) partly worked boulders of jade at Littleton and Yale on Lower Fraser River; jade implements in museums at Ottawa and Montreal, 366 ; enumeration of specimens, 366-367 ; chemical composition of jade, 367 ; implements and fragments, 368 ; figures of boulders from Littleton and Yale with description, 368, 369, 370 ; quotation, (370-378) from Prof. Meyer (Ueber Nephrit, etc.); chisel from Queen Charlotte Islands, 374-375.

cu———Notes and Observations on the Kwakiool People of Vancouver Island. [Reprint from Trans. Roy. Soc. of Canada, Vol. V (1887), pp. 1-36.] Montreal, 1888, pp. 36, 4vo.

> Mode of life, arts, customs of Kwakiool, pp. 13-17 ; houses, 13 ; totem-posts, 13-14 ; copper-plate, 14 ; burials, 16-17.

cu———Notes and Observations on the Kwakiool People of Vancouver Island. Proc. and Trans. Roy. Soc. of Canada, Vol. V (1887), Sec. II., pp. 1-36.

cu———Notes on the Indian Tribes of the Yukon District and adjacent northern portion of British Columbia. (Reprint from Annual Report of Geological Survey of Canada, 1887, pp. 191B-213B), pp. 1-23.

> Notes on stone implements of the Tahltan Indians, p. 6 ; weaving, 6 ; masks, 7 ; graves of Kutchin Indians, 13 ; graves of Tagish, 15.

c DEANS, JAMES.—The Worship of Priapus among the Indians of British Columbia. Amer. Antiquarian and Oriental Journal, Vol. IX. (1887), pp. 368-9.

> Describes lingam images dedicated to Slo-caw (Priapus).

c ———Inside view of a Huidah Dwelling. *Ibid.* pp. 309-310.

> Describes the inside construction, arrangement, etc., of an ancient Huidah house on one of the Queen Charlotte Islands.

c DUNS, PROF.—On Stone Implements from Nova Scotia and Canada, and on the use of Copper Implements by the aborigines of Nova Scotia. Proc. of Soc.

of Antiquarians of Scotland, New Series, Vol. III. (1879-1880). Edinburgh, 1880, pp. 176-180.

Describes (p. 176) stone axe (from entrance to Pictou Harbour, N. S.) of heavy greenstone, pitted over with small holes ; porphyrite scraper from L. Superior, Micmac axe from Middle River Point. Pictou, N.S., granitoid axe from Merigomish, N.S., 178; skinning knife from L. Superior, 3 arrowheads from Lunenburg, N.S., 2 arrowheads from L. Superior. 5 unfinished arrowheads from Merigomish, N.S., 1 from Prince Edward Island, and some from Canada West. 179 ; pp. 179-180. notes on use of copper founded on Dawson and Paterson (*q. v.*)

l DURAND CHARLES.—Indian Graves on the Humber. Paper read before York Pioneers, Dec. 26, 1886. See note in "Toronto Globe," Jan. 15, 1887.

c EELLS, REV. MYRON.—The Thunder Bird. American Anthropologist, Washington, D.C., Vol. II. (1889), pp. 329-326.

Notices (p. 334) masks of Bella-Bella and Makah Indian ; war-clubs p. 334.

cu GATSCHET, A. S.—The Beothuk Indians. Proc. Amer. Philos. Soc. Phila., Vol. XVII. (1885), pp. 408-424.

Ethnologic notes, 411-412 ; bibliography, 412-413 mentions archœological articles.

u GIBB, SIR GEORGE DUNCAN.—Stone Implements and fragments of Pottery from Canada. Report of Proc. of Brit. Assoc. f. Adv. of Science. Forty-second meeting, 1872, p. 186.

tu GORDON, REV. DANIEL M.—Mountains and Prairie. A Journey from Victoria to Winnipeg *via* Peace River Pass. Montreal, 1880, pp. X., 310, 8vo.

Describes (pp. 20-21) fish-rakes for catching oolachan (candle-fish); curious carved bowl or wundah-mortar, up the Skeena River, 65; carved totem-posts, 68; graves, 68-69; lip-ornaments and nose-rings of Achwiligate Indians, 84-85.

cu GRANT, W. C. COLQUHOUN, F.R.G.S.—Description of Vancouver Island by its first Colonist. Journ. Roy. Geog. Soc. London, Vol. XXVII. (1857), pp. 268-320.

Describes dwellings, implements, etc., of Indians, pp. 299-300; burial, 301, 302, 303; money, wampum, 307 ; spears, 300.

u HALE, HORATIO.—On the Nature and Origin of Wampum. Report of Proc. of Brit. Assoc. f. Adv. of Science. Fifty-fourth meeting (Montreal, 1884), London, 1885, pp. 910-911.

[Abstract]. General notes.

u HALIBURTON, R. G.—Notes on a Tau Cross on the Badge of a medicine man of the Queen Charlotte Islands. Report of Proc. of Brit. Assoc. f. Adv. of Science. Fifty-sixth meeting (Birmingham, 1886), London, 1887, p. 845.

[Abstract]. Describes symbol on large sheets of copper to which Indians attach a high value. See Dawson, G. M.

tu HATTON, JOSEPH AND HARVEY, REV. M.—Newfoundland, its History, its Present Condition, its Prospects in the Future. Boston, 1888, pp. XVII., 422.

Chapter VII. (pp. 168-187). The Aborigines. Contains remarks on the implements, utensils, weapons, etc., of Beothuks.

u HECTOR, JAMES, M.D., AND VAUX, W.N.W., M.A.—Notice of the Indians seen by the exploring expedition under the command of Captain Palliser. Trans. Ethnol. Soc. of London. New Series, Vol. I. (1861), pp. 245-261.

c HIND, HENRY YULE, M.A., F.R.G.S.—Narrative of the Canadian Red River exploring expedition of 1857 and of the Assiniboine and Saskatchewan exploring expedition of 1858. London, 1860, 2 vols. Vol. I. pp. XX., 494; Vol. II. pp. XVI., 472.

Vol. I. pp. 89-90, describe Indian Mounds near Long Rapids, Rainy River: ' standing stone," p. 307; remains of ancient encampments in Qu'Appelle Valley p. 340; Indian buffalo pound, 356-358; description and discussion of wampum, 417-420 (references to Lafitau, Sagard, Champlain and Bressany); Indian fish-weir, 491.

Vol. II. ochre, p. 18; birch bark tents, 63, snowshoes, 85; Sioux dress and moccasins, 105; Sioux knife-sheath, 119; Cree medicine bag, 128; medicine rattle, 132; spirit charm, 134; pp. 137-141 describe pipes, with 16 figures; figures of tobacco pipes of the Swampy-Crees of L. Winnipeg, and of the Ojibways of Rainy Lake p. 139; figures of Sioux, Chepewyan, Plain Cree, and Blackfoot pipes, p. 140; figures of Babeen pipes, p. 141; Cree fire-bags, 143; Sioux quiver, bow and arrows, 144; Indian graves, 164-165; Huron ossuaries, 165; engraving of Indian burial-places, facing, p. 166; Indian graves are noticed at Vol. I., pp. 90-436, II., 122, 124, 164.

HIRSCHFELDER, C. A.—Gi-ye-wa-no-us-qua-go-wa, Sacrifice of the White Dog. The Indian, Vol. I., pp. 73-74, 86-87, 98-99.

General description of sacrifice of white dog by the Canadian Onondagas. Description of preparation and adorning the dog, p. 86. See Indian, the.

———A Ceremonial Ornament. The Indian, Vol. I., No. 5 (March 17, 1886), p. 49.

Describes a stone found on Christian Island, Georgian Bay, semi-circular, with hole through the centre.

c ———Anthropological Discoveries in Canada. Read before the Canadian Institute, November 18, 1882. Proc. Canad. Institute, New Series. Vol. I (N. S.), p. 354, [Title].

The paper appeared in "Toronto Mail," December 2, 1882. Deals with the Ossuaries of Simcoe County, Ontario.

c———The Practical and Theoretical Study of Anthopology. Read before the Canadian Institute, March 31, 1883. Proc. Canad. Inst., New Series, Vol. I (N. S.), p. 355, [Title].

The paper appeared in the "Toronto Mail," April 14, 1883.

u———Anthropological Discoveries in Canada. Report of Proc. of Brit. Assoc. f. Adv. of Science. Fifty-fourth meeting (Montreal, 1884), pp. 915-916. [Abstract].

Brief General description of forts, burial-places, ossuaries, archæological relics.

tu HISTORY OF THE COUNTY OF YORK, ONTARIO. Illustrated. Toronto, C. Blackett Robinson, 1888, 2 vols.

Describes (Vol. I., p. 107) Indian sites at River Rouge, Greenvale and Claremont in Pickering Township; village site on lot 9, concession 8, Whitchurch opened in 1848, pp. 148-149; on lot 16, concession 6, pp. 149-150; site near Aurora, p. 150.

HUNTER, A. F., B.A.—Ahoendoe; the last refuge of the Hurons. The Indian, Vol. I., p. 217.

Describes flight Hurons (after attack of Iroquois in 1649) to the Island of Ahoendoe (Christian Island) in Georgian Bay, and the relics found there. Ruins of fort, stone enclosures, pottery, etc.

cutl———[Villages and Ossuaries of the Huron country]. Archæological Report. Report of Canadian Institute, Session 1886-7, Toronto, 1888, pp. 57-58.

General description and enumeration of Huron village sites in Simcoe County, 57 ; description of ossuaries and remains found therein, 58.

Mr. Hunter, to whom the compiler of this Bibliography is indebted for various items, has a large amount of valuable information still in MSS.

c HUART. L'ABBÉ.—L'Age de Pierre au Saguenay, Le Naturaliste Canadien, Tome XVII. (1886-7). pp. 86-91.

Describes stone relics of Saguenay Valley, Province of Quebec.

"INDIAN, THE." Hagersville [Ontario]. Vol. I. (Nos. 1-24, Dec. 30, 1885, to Dec. 29, 1886), pp. 1-264, 4to.

The Canadian Archæological Museum. Circular of Curator of the Canadian Institute. No. 1 (Dec. 30, 1885), p. 6.

A Ceremonial Ornament, C. A. Hirschfelder. No. 5 (March 17, 1886), p. 49. Describes a specimen found on the north-east end of Christian Island in Georgian Bay, semi-circular in form, with hole through the centre. [A short note on discovery of Indian skeleton at Adolphustown]. *Ib.* p. 50.

Gi-ye-wa-no us-qua-go-wa, Sacrifice of the White Dog. No. 7 (April 14, 1886), pp. 73-74, C. A. Hirschfelder.

[Short note on discovery of bones of an Indian, with Queen Ann musket, kettle, etc., on farm of R. Kennedy, 7th concession, London]. *Ib.* p. 82.

Sacrifice of White Dog (continued). No. 8 (April 28, 1886) pp. 86-87 ; No. 9 (May 12, 1886), p. 98-99. Describes sacrifice as carried on by the Canadian Onondagas.

How the Crees banquetted me. No. 10 (May 26, 1886), pp. 110-111. Description of Cree dog-feast. Pipe (110), kettles (110).

* Ahoendoe the last refuge of the Hurons. A. F. Hunter No. 19 (Nov. 24, 1886), p. 217.

[The above citations are from a copy of the work kindly lent the compiler by Mr. A. F. Hunter, B.A.]

tu JAMESON, MRS.—Winter Studies and Summer Rambles in Canada. London, 1838. 3 vols.

Describes (Vol. III., p. 324) Indian graves ; "Island of skulls," an ancient sepulchre of the Hurons, 327.

tcu JONES, REV. PETER.—History of the Ojebway Indians, 1861.

Chap. V. (pp. 70-), mode of life, wigwams, ancient domestic implements, mode of travelling, dress ; mode of burying the dead (98-100); weapons of war (131-132); amusements (134-135); wampum (139-140). The following plates accompany the work : opp. p. 73, plate containing figures of pottery and pipes ; p. 83 and p. 85, idols ; p. 99, Muncey graves ; 131, weapons ; 135, drums, rattles, etc.; 145, implements of medicine men.

*———Life and Journals of Kah-ke-wa-quo-na-by! (Rev. Peter Jones), Wesleyan Missionary. Toronto, 1860.

pp. 43-4, description of Pagan Temple at Munceytown ; pp. 233-4, ornaments ; p. 242, deer-fence.

cu JOURNAL OF EDUCATION FOR UPPER CANADA. Edited by the Rev. Egerton Ryerson, D.D., Chief Superintendent of schools, assisted by Mr. J. George Hodgins, deputy superintendent. Vol. XVIII. (1865). Toronto, 1865.

Canadian Archæology, pp. 3-4. General remarks on Huron-Iroquois as compared with Hebrews, p. 3 ; relics discovered in Hospital street, Montreal, 4 ; village of Hochelaga, 4 ; notice of relics discovered in Augusta township, near Prescott, mounds, tumuli, etc., 4 ; near Spencerville, in Edwardsburg township, similar to foregoing, pottery, etc.

cu———Vol. XIV. (1861), p. 16.

Short note on Indian relics discovered at Montreal.

u KALM, PETER.—Travels into North America etc. London, 1771. 3 vols.

Vol. III., pp. 123-127, Notice of pillar with Tatarian characters inscribed on it, 900 miles west of Montreal; pp. 179-180, note on wampum; 230-231, tobacco pipes; 273-274, wampum.

cu KANE, PAUL.—Wanderings of an Artist among the Indians of North America, etc. London, 1859. XVIII, 468.

Describes, with wood-cut, dark stone pipe, p. 14; Chinook and Cowlits head-flattening. 180-181; Chinook utensils, 185; Chinook hut-building, 186; burial place, 202-204; fish-hooks, 43; fishing implements, 213-214; masks, 217; wiqua shells, 238; Babine lip and nose ornaments, 241-242; game of al-kol-lock (bone and ring game), 310-311.

c KOHL, J. G.—Kitchi Gami. Wanderings round Lake Superior (Trans. Lascelles Wraxall). London, 1860. XII., 428.

Describes Chippeway house, cradle and ornamentation, pp. 5-10; construction of canoes, 29-34; medicine lodge, 41-42; sacrificial stone, 42; figures used in game of *pagessan*, 82; game-sticks, 90; wampum, 136; birch-bark records, 145-165; figures of birch-bark drawings, pp. 146, 150, 153, 154, 157, 158, 159, 215, 287, 292, 387, 398, 400, 403; pipes, 282-283; figure of tomahawk, 296; decoy-fish, 330; spears, 330; snow-shoes, 333-337; Indian grave at Rivère au Désert, 373; dress of chiefs, 381.

u KRAUSE, DR. AUREL.—Die Tlinkit Indianer. Ergebnisse einer Reise nach der Nordwestküste von Amerika und der Beringsstrasse. Jena, 1885, XVI., 420.

S. 302-316, deal with the Haidahs; 307-308, houses; 309 310, games.

KUMLEIN, LUDWIG.—Fragmentary notes on the Eskimo of Cumberland Sound. Science, Vol. I., pp. 85-88, 100-101, 214-218.

———Contributions to the natural history of Arctic America, made in connection with the Howgate Arctic expedition, 1877-78. Washington, 1879, pp. 1-179. Forms Bulletin 15 of the National Museum.

Pp. 11-46 take up ethnology; p. 45, description of charms and ornaments of Eskimo.

u LA HONTAN, MR. LE BARON DE.—Nouveaux Voyages dans l'Amérique Septentrionale, etc. A la Haye, 1703. 2 vols.

Vol. 1. Facing p. 35, full page illustration of Iroquois bark canoe and paddle, description of same, p. 35; pp. 47-48, calumet de paix; p. 48, collier, belts of wampum; facing p. 73, figure of snow-shoes (raquettes), description 73-74.

Vol. II. Title is Memoires de l'Amérique Septentrionale ou la suite des Voyages de Mr. le Baron de Lahontan. pp. 151-152, burial; facing p. 175, figures of bow, arrow and tomahawks; facing p. 189, totems of Hurons, Ouataouas, Nadouissis (Scioux) Illinois; armours, 189-91; facing p. 190 totem of Outchipoues (Sauteurs), Outagamis, Oumamis, Pouteouatamis; opp. p. 191, full page of "Hieroglyphes," with explanations on pp. 191-194.

cu LANE, CAMPBELL.—Sun Dance of Cree Indians. Canadian Record of Science, Vol. II. (1886), pp. 22-26.

LANG, J. D., D.D.—Origin and Migrations of the Polynesian Nation. First edition, 1834.

Brief reference to earthwork near Lake Simcoe in foot-note to p. 109. Note not in second edition. [Note of Mr. A. F. Hunter.]

u L'HEUREUX, JEAN, M.A.—Notes on the astronomical customs and religious ideas of the Choketapis or Blackfeet Indians. Report of Proc. of Brit. Assoc. for Adv. of Science. Fifty-fourth meeting (Montreal, 1884).

P. 921 [Abstract].
Notices talismans, tau-cross, and stone circle.

u ———Notes on the Kekip Sesoators or ancient sacrificial stone of the N. W. territory of Canada. Report of Proc. of Brit. Assoc. for Adv. of Science (fifty-fourth meeting, Montreal, 1884). London, 1885.

Pp. 921-922 [Abstract.]
Describes boulder of quartz on S. E. side of Red River, said to be used as sacrificial stone by Blackfeet Indians.

cu Markham, Clements R., F.R.G.S.—On the origin and migrations of the Greenland Esquimaux. Journ. Roy. Geogr. Soc., London, Vol. XXXV (1865), pp. 87-99.

Description, p. 93, of yourts of stone on Melville and Banks Island ; p. 94, general notice of Eskimo remains on Melville, Bathurst and Cornwall Islands ; p. 95, remains on Wellington Channel, Griffith Island, Prince of Wales Island, N. Somerset, N. Devon, etc.

ut Mason, O. T.—Resemblances in Arts widely Separated. Amer. Naturalist. Vol. XXI (1886), p. 251.

List and description of different varieties of throwing-sticks in use amongst the Eskimo ; amongst other, at Ungava Bay, Baffin Bay, Anderson River, etc.

tcu———Indian Cradles and Head-Flattening. Science, Vol. IX (1887), pp· 617-620.

Describes (p. 617) cradle of Bella Bella Indians of British Columbia, and of Chinook Indians. On pp. 619, 620, are plates containing amongst others figures of Bella Bella and Chinook cradles.

c ———The Beginnings of the Carrying Industry. American Anthropologist, Vol .II. (Washington, 1889), pp. 21-46.

Contains (p. 29) figure of hand-basket of Micmac Indians of Nova Scotia. See also Smithsonian Annual Report, 1884 (II., fig. 96).

u Mayne, Commander R. C., R.N., F.R.G.S.—Four Years in British Columbia. London, 1862, pp. XI., 468.

Chapter XI. (pp. 242-304), Aborigines of British Columbia. Pp. 253-254, clam-cooking ; 254-5, fish-grease making ; 258, carving and painting ; 271-2, sepulture (with plate); 281-283, facial and other ornaments ; 283-284, clothing, canoes, etc.

* McLean, John. M.A., Ph.D.—The Indians ; Their Manners and Customs. Toronto, 1889. Pp. X., 350.

Gives interesting accounts of wampum, pp. 16-20 ; Indian burial customs, 29-36 ; the peace-pipe, 54-57 ; Indian charms, 70-73 ; picture-writing, 90-94 ; iron-stone idol, 201-203.

cu. Mercer, Major,—Catalogue of a few remarkable coincidences which induce a belief of the Asiatic origin of the North American Indians. Trans. Lit. and Hist. Soc. of Quebec. Vol. II. (1829), pp. 240- .

General enumeration of resemblances in customs, arts, dwellings, implements, weapons.

Meyer, A. B.—Ueber Nephrit und æhnliches Material aus Alaska. Jahresbericht (XXI) des Vereins für Erdkunde zu Dresden, 1884. See Dawson, G. M.

c Miller, Peter, F.S.A. Scot.—Notice of Three Micmac Flint Arrow-heads from Merigomish Harbour on the northern coast of Nova Scotia, now presented to the museum. Proc. Soc. of Antiq. of Scotland, Vol. IX., N. S. 1886-7 (Edinburgh, 1887), pp. 212-214.

Describes arrow-heads from Merigomish Harbour, Pictou county. N. S. Description (p. 212) of camping ground ; p. 213-4, quotation from Paterson's (*q v*) History of Pictou County, describing skull' stone axes, arrow-heads, etc., plowed up by Mr. Donald McGregor of Big Island, and description of ancient burial site.

cut "NATURE." London. Vol. XXXIX (1889), p. 545.

Brief note on paper of Dr. F. Boas on "The Houses of the Kwakiutl Indians of British Columbia" (U. S. National Museum).

l MONTGOMERY, PROF. HENRY, Ph. D.—Indian Remains in Simcoe and Muskoka. Toronto *Globe*, August 3rd, 1888. [Title and description from H. F. Hunter, B.A.]

Treats of Huron ossuaries, burial pits, village sites, pottery, etc., in Medonte, Simcoe county, and supposed inscribed rock in Muskoka.

NOTICE SUR LES MOEURS ET COUTUMES des Indiens Esquimaux de la baie de Baffins, au pôle Arctique, suivie d'un vocabulaire Esquimaux-français. Tours, Mame. 1826. [Title from Pilling's Bibliography of the Eskimo Language.]

NOUVELLE BRETAGNE. Vicariat Apostolique d'Athabasca et Mackenzie. Annales de la Propag. de la Foi., Vol. XLIII. Paris, 1871. 8vo. Pp. 457-78. [Title from Pilling.]

ct PACKARD, A. S.—Notes on the Labrador Eskimo and their former range southward. Amer. Naturalist, Vol. XIX. (1885), pp. 471-481.

t PATERSON, REV. GEO., D.D.—The History of Pictou County, Nova Scotia. 1877.

Contains a sketch of the Archæology of Pictou county. See Miller, Peter.

———Nova Scotia Archæology. The Stone Age. The Paterson Collection' Dalhousie *Gazette* (Dalhousie College), Vol. XXI., No. 7. Halifax, Feb. 21, 1889.

Description of the Paterson collection of stone, implements, etc., in the museum of Dalhousie college.

PETITOT, ÉMILE.—Sur quelques armes de pierre rapportées d'Amérique, avec atlas par l'auteur. Dans les *Matèriaux*, d'Émile Cartailhac. Toulouse, 1875. [Title from Petitot's "Quinze Ans sous le Cercle Polaire."]

u ———Vocabulaire français-esquimau, dialecte de Tchiglit des bouches du Mackenzie et de L'Anderson, précédé d'une monographie de cette tribu et de notes grammaticales. Paris, 1876. I-LXIV, 1-78, 4to.

The "Monographie" (IX.-XXXVI) contains some items of archæological interest.

* ———Quinze Ans sous le Cercle Polaire. Mackenzie, Anderson, Youkon. Paris, 1889. Pp. IV-XVI., 1-322.

Notices burial of Déné, 133; Dindjié yourts, 181; Déné hut, 217; opp. p. 190 is a full page illustration of a Dindjié camp, and opp. p. 202 a full page illustration of a group of Déné on a winter voyage; opp. p. 217 is a full page illustration of the interior of a Déné hut with its occupants.

cu———On the Athapasca district of the Canadian N. W. T. Canad. Record of Science, Vol. I. (1884-5.). [Article reprinted from Proc. Roy. Geog. Soc. Lond., Nov. 1885.]

Pp. 46-53 taken up with a general description of the Indian tribes of that region.

* ———En Route pour la Mer Glaciale. Paris. Pp. 394.

* ———Les Grands Esquimaux. Paris, 1887. Pp. VI., 307.

Describes Eskimo sledges, p. 11; Eskimo pipes, 18; Eskimo huts, 49-52; Eskimo dances, 153-157; tents, 170; nets, 206. It contains a map of the region in question, besides seven plates, the chief of which are: Portrait of the chief of the Liverpool Bay Eskimo (facing p. 78); Eskimo village at mouth of Anderson River, 138; interior of an *igloo*, 192; Eskimo dance, 248; Eskimo camp, 299.

*cu*PHILLIPS, HENRY, Jr.—On a supposed Runic Inscription at Yarmouth, Nova Scotia. Proc. Amer. Philos Soc. Philadelphia. Vol. XXI, (1883-4), pp. 491-2, with plate on p. 490.

c QUESNEL, LEO.—Les Esquimaux, d'après M. Petitot. Revue Scientifique. Tome XLII., 3 e Série, 8e Année (1888), pp. 670-674.

Describes (p. 671) construction of an iglou. See Petitot Émile.

cu RAE, DR. JNO.—Eskimo Skulls. Journ. Anthrop. Instit. of Gt. Brit. and Ireland, Vol. VII. (1877-8).

———Eskimo Migrations. Journ. of Anthrop. Instit. of Gt. Brit. and Ireland, Vol. VII. (1877-8).

c REVUE CANADIENNE. Québec. February, 1875, pp. 108-109.

Describes Indian dress, feasts, burial, etc.

*cu*ROSS, BERNARD R.—An Account of the Botanical and Mineral Products useful to the Chepewyan tribe of Indians inhabiting the McKenzie River District. Canad. Naturalist and Geologist and Proc. of the Nat. Soc. of Montreal. Vol. VII. (1862), pp. 133-137.

u SAGARD [THEODAT], F. GABRIEL.—Le grand Voyage au Pays des Hurons situé en l'Amérique vers la mer douce, es dernières confins de la Nouvelle France dite Canada, avec un dictionnaire de la langue Huronne, etc. A Paris, 1632. Nouvelle Edition. Publiée par M. Émile Chevalier. Paris, Librairie Tross, 1865. Deux Tomes, pp. 1-268 (orig. paging, 1-380.)

Describes Canots (canoes), p. 89 (129); vessels of bark, 91 (132); cradles, 118 (170); chappelets, 135-136 (194-5): burials, 199 (285), 200 (287); birch-bark drawing, 245 (348), 246 (349); De la grande feste des Morts, 203-206 (291-295).

cu SCHULTZ, DR, M.P.—The Mound Builders of the West. Canadian Naturalist and Geologist, etc. Vol. IX. (1881), pp. 60-62.

Describes mounds and contents (skeletons, shells, ornaments), in Lisgar County, Manitoba.

tu SCHWATKA, FREDERICK.—Along Alaska's Great River. New York, 1885. Pp. 360.

Describes pp. 216-220, Ayan grave, near old Fort Selkirk, with full page illustration on p. 217 ; Ayan or Iyan paddle, p. 220 ; Ayan and Chilkat gambling tools, with figure 227 ; dress and ornaments, 228 ; house and household implements, 230 ; Ayan moose-arrow, 230-232, with arrow figure on p. 231 ; knives, 232 ; winter-tent, 232-3 ; carved pins for fastening marmot snares, 152 ; ruins of old Fort Selkirk. 205.

tu SKIDMORE, E. RUHAMAH.—Alaska, its southern coast and the Sitkan Archipelago. Boston, 1885, pp. 333.

Pages 36-45 treat of the Haidahs. Houses and canoes of the Kasa-an (Haidah) Indians, 36-37 ; figures of three carved spoons and Shaman's rattle, 38 ; Haidah carvings and ornaments, 38-30 ; Shaman's totems, 41-42 ; figure of Kasa-an pipe, 268 ; totem-poles, 272-273 ; chief's residence at Kajan, figure, 274 ; Haidah canoes, 275 ; halibut-hook, 276 ; carving, 275-7.

ctu "SCIENCE," New York. Vol. IV. (1884), pp. 316-320.

Brief abstracts of papers read at Montreal meeting of the British Assoc. for Adv. of Science.
Range of Eskimo in space and time—Dawkins—316-317.
Huron Iroquois as typical race of Amer. Aborigines—Wilson—318.
Anthropological Discoveries in Canada—Hirschfelder—318.
Origin of Wampum—Hale—320.

tuc———Vol. VII. (1886), p. 186.

Brief note on exploration of mounds in Manitoba.

"It appears from surveys made during the past summer that the northern limits of the Mound-Builders lie beyond the Red River of the north."

ctu———Vol. IX. (1887), pp. 606-7. Ethnological notes. The Serpent among the North-west American Indians.

Contains (p. 606) figure of dancing implement representing the Sisiutl. See American Antiquarian.

SCHOOLCRAFT, H. R.—Onéota.

Notices (p. 326), earthworks near Dundas, Ontario.

SCHOOLCRAFT, H. R.—The Indian in his Wigwam or Characteristics of the Red Race of America. New York, W. H. Graham, Tribune Buildings, 1847.

Pp. 324-327 contain a letter, dated from Dundas, Canada West, Oct. 26, 1843, giving an account of a visit to an ossuary in Beverley township. [Title and description from the Rev. W. M. Beauchamp, of Baldwinsville, N.Y.]

c SCOTTISH GEOGRAPHICAL MAGAZINE, THE. Vol. V. (1889), pp. 191-198. The Eskimo Tribes.

A review of "The Eskimo of Tribes; their Distribution and characteristics especially in regard to language," by Dr. H. Rink (Vol. XI. of the Meddelelse on Groenland, Copenhagen, (1887). Treats of implements, pp. (192-193), dwellings, 193-194; dress and ornaments, 194; domestic industries and arts, 194-5; religion and folk-lore, 195; social organisation, 195-7; distribution and division, 197-198.

u SCOULER, JNO., M.D., F.L.S.—On the Indian Tribes inhabiting the N. W. coast of America. Ethnol. Journ. Journ. of the Ethnol. Soc. of London. Vol. I. (1848), pp. 228-252.

u SOUTHESK, THE EARL OF, K.T., F.R.G.S.—Saskatchewan and the Rocky Mountains, A Diary and Narrative of Travel, Sport and Adventure during a journey through the Hudson's Bay Territory in 1859 and '60, Edinburgh, 1875. XXX., 448.

Describes (p. 59) Cree calumet pattern on Skin Robe; p. 258, Assiniboine Pipe and stem, with figure; p. 261, Assiniboine knife-sheath and fire-bag.

u SPROAT, GILBERT, MALCOLM, ESQ.—The West coast Indians of Vancouver Island. Trans. of Ethnl. Soc., London. New Series, Vol. V. (1866), pp. 243-254.

Describes houses (pp. 247-249), arts (249), instruments (250).

u SQUIER, E.G., M.A.—Antiquities of the State of New York, being the results of extensive original surveys and explorations, with a supplement on the Antiquities of the West, Buffalo, 1851.

Notices (pp. 15-16), remains found on Canadian side opposite Morrisville by Dr. Reynolds (*q. v.*); p. 16, figure of terra-cotta mask found there. Pages 100-107 treat of ossuaries, etc.. in Simcoe County, Ontario, after Bawtree (*q. v.*). P. 100, human bones, etc., discovered neor Barrie in 1846, ossuary near St. Tincents; 100-103, ossuary neas Penetanguishene in Township of Giny (read *Tiny*) examined in 1847, from which skulls, 26 kettles of copper and brass, 3 large conch-shells, piece of beaver skin, large iron axe, human hair, copper bracelet, beads, etc., were taken, description of pit, p. 101, kettles 100-102 (figure on page 102). conch-shells 102 (figure on 102), axe, with figure, 102, pipe 102-103, beads 103. Pages 103-104 describe another pit (2 miles from above), and contents; 104-105, a pit discovered in Oro township in November, 1847, in which several hundred skeletons, 26 kettles, one conch-shell, one iron axe, a number of flat perforated shell-beads and pipe were found. Pages 105-6 describe a pit in the Township of Giny (Tiny), from which a large number of skeletons, 16 conch shells, a stone and a clay pipe, copper bracelets, and ear-ornaments, red-pipestone beads, and copper arrowheads were taken. Pages 106-108 deal with a fifth pit in the centre of the Town of Tiny, with figure and plan opposite page 107. P. 108 notices a burial place on Isle Ronde, near the extremity of L. Huron, and one near Hamilton, Ont Pages 108-110 contain quotation from Charlevoix (II., 194), on the *Fête des Morts* among the Hurons and Iroquois. On p. 142, and p. 267, are brief references to earthworks in Canada.

l STONE, WM. L.—Orderly Book of Sir John Johnson during the Oriskany Campaign, 1776-1777. Albany, 1882.

A note on page 68 describes a large Indian burial-ground on the shore of Button Bay, Wolfe Island, discovered in 1878, by reason of the washing away of the shore. Find of large spears, arrowheads and skulls (encased in mica). Also a mound covering skeletons.

THOMAS, MISS NORA.—Burial Ceremonies of the Hurons. Translated from the Relations des Jésuites, 1636, pp. 128-139. Supplemental Note to "Burial Mounds of the Northern Section of the United States," by Prof. Cyrus Thomas in Fifth Annual Report of the Bureau of Ethnology, 1883-1884 (Washington, 1887), pp. 3-139.

Describes the burial customs of the old Hurons of the Province of Ontario as recorded by Brebœuf and others in the Jesuit Relations.

c THOMPSON, GILBERT.—Indian Time Indicators. American Anthopologist, Washington. Vol. II. (1889), pp. 118.

Describes from Hind (Vol. I p. 150), rude form of sun-dial employed by the Nascapee Indians.

TORONTO "MAIL." Vol. XVIII., No. 7,913. (February 27, 1889), p. 4, col. 6.

Description [from the St. John (N.B.) Educational Review] of Pictographs on the Fairy rocks, between Annapolis and Queen's County.

———September 20, 1889. P. 8, col. 2.

Notice of ossuary and contents, near Thornhill, Ontario.

cut TURNER, LUCIEN M.—On the Indians and Eskimos of the Ungava District, Labrador. Proc. and Trans. Roy. Soc. of Canada, Vol. V. (1887), Sec. II., pp. 99-119.

Describes Nascopie funeral customs, 113; dressing deer-skins, 110-111; wigwam, 111; method of burial of *Itivimut* (Ungava) Eskimos, Tahaagmagut, 103; dress of Tahagmyut, 102; ivory gambling-blocks, 102.

c ———Scraper of the Naskopie (Naynaynots) Indians. American Anthropologist, Washington. Vol. I. (1888), pp. 186-188.

Describes a bone-scraper of the Nascopies and method of making and manner of using it.

cu TYLOR, E. B., D.C.L., F.R.S.—Old Scandinavian Civilization among the Modern Esquimaux. Journ. Anthrop. Inst. of Gt. Brit. and Ireld. Vol XIII. (1884), pp. 348-356.

u TYTLER, PATRICK FRASER.—The Northern Coasts of America and the Hudson's Bay Company's Territories, with a continuation by R. M. Ballantyne. London, 1854.

Describes ornaments and implements of the Dog-Ribs, 148; house of the Diguthee Dinees or Quarrellers, 152-153; carved and painted posts, 180; canoes, 180; Eskimo nose-ornaments, etc., 234-255; dress, 235; Eskimo House of Assembly on Atkinson Island, 244-245; Kayaks and oomiaks, 369-370.

u VIRCHOW, HERR.—Die anthropologische Untersuchung der Bella-Coola. Zeitschrift für Ethnologie, 18. Bd. (1886), S. 206-215.

Treats of dance-masks, 208; houses and totem-poles, 208; wood-carving, 208; tattooing and scarring, 210-211; physical characteristics, 212-215, and table of measurements of body and skull of Bella-Coola.

l WELD, ISAAC, JR.—Travels through the States of North America and the Provinces of Upper and Lower Canada during the years 1795, 1796 and 1797. Fourth edition. Illustrated and embellished with 16 plates. London, 1807, 2 vols., I-VIII., 1-376.

Describes Indian dress and ornaments, 231-238; brooches, 236; bracelets, ring, ear-rings, etc., 236, nose-pendants, 237; silver and shell breast-plates, 237; utensils, 241-243; weapons, 243-244; wampum, 249-252; quill-work, 259-260.

c WEST, JOHN, A.M.—The Substance of a Journal during a residence at the Red River Colony, British North America and frequent excursions among the North-west American Indians, in the years 1821, 1822, 1823. Second Edition enlarged with a journal of a mission to the Indians of New Brunswick and Nova Scotia and the Mohawks on the Ouse or Grand River, Upper Canada, 1825-1826. London, 1827, I-XVI., 1-326.

Describes Eskimo toys, images, etc., 7; Indian (Saulteaux ?) burial, 33; burial of Stone (?) Indians, 55.

tu WHYMPER, FREDERICK.—Travel and Adventure in Alaska. New York, 1869. I-XIX., 353.

Describes (p. 74) masks used by the Aht Indians of Vancouver Islands with figure of the mask on page 77.

u WILSON, CAPTAIN.—Report on the Indian Tribes inhabiting the country in the vicinity of the 49th parallel of N. Latitude. Ethnol. Journ. Journ. of the Ethnol. Soc. of London. Vol. IV. (1865), pp. 275-332.

Describes, Kootenay head flattening: burials; dwellings; canoes; Selish houses; dress; native manufactures.

tuc WILSON, SIR DANIEL, L.L.D., F.R.S. E.—The Huron Race and its Head-Form. Canad. Journal, Second Series, Vol. VIII. (1871-3), pp. 113-134.

Plates opposite pp. 113, 126, 128; table of measurements, p. 131.

tu———Prehistoric Man. Researches into the origin of Civilization in the Old and New World. Cambridge and London, 1862, 2 vols. New Editions, 1876, 2 vols.

Passim, and at I., 105, archæological discoveries at Toronto.

u ———Supposed prevalence of one Cranial Type throughout the American aborigines. Edinburgh New Philos. Journ., VII. (1858), 1-32.

u ———Some ethnological phases of Conchology. *Ib.* IX. (1859), 65-82; 191-210.

u ———On some modifying elements affecting the ethnic signification of peculiar forms of the human skull. *Ib.* XIV. (1861), 269-281.

cu———On some modifying elements affecting the ethnic significance of peculiar forms of the human skull. Canadian Journal. Second Series, Vol. XV. (1861).

cut———Pre-Aryan American Man. Proc. and Trans. Roy. Soc. of Canada. Vol. I. (1882-3), Section II., pp. 35-70.

Brief references to Eskimo and Haidah dwellings, 38; Haidah carving and ornaments, 40; companion of art of Eskimo and man of Vezère, 48-50.

tcu———Inaugural Address. Read May 22, 1882. Proc. and Trans. Roy. Soc. of Canada. Vol. I. (1882-3), Sec. II., pp. 1-12.

Brief comparison (p. 14) of art of Eskimo and Haidahs.

utc———The Huron-Iroquois of Canada. A Typical Race of the American Aborigines. Proc. and Trans. Roy. Soc. of Canada. Vol. II. (1884), Sec. II., pp. 55-100.

*tu*WINSOR, JUSTIN.—The Progress of opinion respecting the origin and antiquity of man in America. Narrative and Critical History of America. Edited by Justin Winsor. Vol. I. (1889), pp. 369-412.

Contains valuable bibliographical items. Also, p. 377 and 389, figure of Hochelaga skull from Dawson "Fossil Men."

REMARKS.

The present contribution contains some 160 titles (the first contribution contained 74) and the compiler hopes, with about three more, to make the Bibliography fairly complete. The Relation, of the Jesuits, works like those of Charlevoix, Lafitau, etc., will be cited in the next section, as will also the mass of books of travel relating to the Arctic coast of British America (some of which will be found in the present section), together with local histories and fugitive articles in newspapers and periodicals.

☞ *C*, *l*, *t*, *u*, before a title mean that the work from which the title and description have been taken, is to be found in the Library of the Canadian Institute (*c*), the Library of the Ontario Legislature (*l*), the Toronto Public Library (*t*), or the Library of the University of Toronto (*u*). A work marked by an asterisk (*) is cited from a copy in the possession of the compiler.

CORRIGENDA.

Corrigenda in No. I. (Report, 1887-188). P. 6, l. 27, read Sœur Ste Hélène. P. 6, line 8, read 2 vols.; p. 3, l. 41, read Aborigènes.

Oct 19-1908

SEVENTH ANNUAL REPORT

OF THE

CANADIAN INSTITUTE.

SESSION 1893-4.

BEING PART OF APPENDIX TO THE

REPORT OF THE MINISTER OF EDUCATION,

ONTARIO.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, &c., 68 AND 70 FRONT STREET WEST.
1894.

CONTENTS.

Archæological Report 5
Our Exhibit at the Columbian Exposition 6
Additions to the Museum 7
Notes 9
Lanark County, by Dr. T. W. Beeman 15
Balsam Lake, by Geo. E. Laidlaw 17

☞By an oversight the last report was numbered Fifth, instead of Sixth.

CANADIAN INSTITUTE.

SEVENTH ARCHÆOLOGICAL REPORT.

BY DAVID BOYLE.

To the President and Council of the Canadian Institute:—

During the past year nothing has been done directly by way of original work under the auspices of the Institute. This failure to perform what we all so much desire was purely on account of circumstances beyond our control, but by no means for the reason that there was nothing to be done. On the contrary, ever since we have been able to devote any special attention to this kind of work, the possible field of operation has widened to such an extent that, with our present means, the task of going over it, even in the most superficial manner, seems almost hopeless of accomplishment. From time to time we learn of this and that locality in which accidental discoveries have been made, or that appear to offer evidences worthy of examination. We have reason to feel gratified that now, at all events, a larger measure of intelligence animates those who make such finds, or who meet with such proofs of early occupation, and that even when the results may not be all that the Institute could desire, the specimens are not destroyed in the one case, nor is the knowledge allowed to lapse in the other. The efforts of the Institute to educate public opinion on this subject have not been put forth in vain, and thus it is that while we have not been able to investigate directly, or at first-hand, we have in various parts of the province those who are actuated by an earnest desire to increase public knowledge on archæological matters, and who, on their own account, take every opportunity to visit localities, make examinations, and forward to us the results. During the past year we have been mainly indebted to Mr. George E. Laidlaw, of Victoria Road, in the County of Lindsay, and Dr. T. W. Beeman, of Perth, Lanark County. From both of these gentlemen we have received valuable contributions on previous occasions, in manuscript as well as in kind.

In a paper following this Mr. Laidlaw refers specifically to many of the two hundred and fifty specimens he now adds to his already good collection.

The specimens presented by Dr. Beeman consist chiefly of celts, gouges, tablets and flints. Some of the gouges are quite equal to the best in our cases, particularly one found by Mr. David Lepper on Lake Rideau. Mr. George Hone, along with other specimens, sends a very fine spearhead, almost perfect, found by him on Plum Point, Rideau Lake. Another excellent spearhead, eight inches long and well-formed comes from Mr. William Mason, of Jones' Falls. This fine specimen was found in the township of South Crosby. Mr. Mason supplies, also, a tablet or gorget of dark red slate with two holes. Other contributors to the collection sent by Dr. Beeman are Messrs. J. Stewart, W. J. Morris, Chas. Paget, D. McKeown, Wm. McLaren, Jas. Graham and John Poole, to all of whom thanks are due for their valuable assistance in forming a collection to illustrate ancient life on the shores of Rideau Lake.

We are under obligations to Miss Ruth Elridge for a collection of thirty flints from the Cherokee country, in the neighborhood of Rome, in the State of Georgia. Most of these are roughly flaked from chert. Only about half of the number show any attempt to form a neck. Two of the arrow-points are made of quartzite, a kind of material frequently employed for this purpose in the part of the country from which Miss Elridge forwards her specimens. She sends, also, two fragments of pottery, and a piece of quartzite about two inches long, quadrangular in form. It is difficult to say whether the latter has acquired its present shape by natural or artificial means. At any rate it is a rich specimen of free gold.

Miss Elridge's collection was forwarded to us through one of our members, Mr R. Russell Baldwin, of this city.

Mr. James S. Cairnduff, who has on former occasions sent us some excellent specimens, writes that he has been examining an old encampment in Harvey township, where he has succeeded in procuring some interesting material which he intends to forward to us soon. Mr. Cairnduff mentions specially a mortar and rubbing-stone combined. It is of syenite, containing red garnets. On its surface are two hollows, one on each side of the stone—not exactly opposite each other or they would meet. The opposite surface looks as if it had been used for rubbing purposes. It is about two feet long, four inches thick, and pointed at the ends.

OUR EXHIBIT AT THE COLUMBIAN EXPOSITION.

At the request of Mr. Commissioner Awrey, you consented to a selection being made from our cases for exhibition at the World's Fair in Chicago, and I accordingly chose about six hundred of the best and most characteristic specimens for this purpose.

The space set apart for Ontario in the Anthropological building was rather small, but was quite advantageously situated near the northern or main entrance. Around this little court was erected a light and tastefully designed framework of iron and wood, surmounted by a canopy of cloth of rich colors, from which depended on each side three long festoons of red, white and blue bunting. Facing the main aisle, and hanging from the centre of the west side, was a handsomely gold-lettered glass sign with the words "Archæology of Ontario." Immediately above this there was a large frame containing a wreath of maple leaves, and the frame itself was draped with several British flags. Two fine portraits of Queen Victoria were also used for decorative purposes—one on the north and one on the south side—and each of these was draped with flags. The wooden framework was painted in deep, rich brown, and all the iron portions were bronzed. The general effect was very good.

Our exhibit was arrayed in twelve table cases, each two by six feet, forming two double rows of six each, with a passage from north to south through the middle of the space. Specimens of a similar kind were placed together, and each was legibly labelled to name the locality from which it came. Three thousand copies of our last reports, containing a catalogue of the specimens on exhibition, were distributed as judiciously as possible, and, so far as I am aware, this was the only publication issued in connection with any exhibit of the kind in the Anthropological building.

My duties elsewhere prevented me from giving as much attention to the Archæological Court as I wished, so that, personally, I came into contact with comparatively few who took any interest in the subject, but I was frequently informed by those who were placed in charge from time to time, that although our exhibit was not so extensive as some others, it was very highly spoken of by many who were well qualified to judge. Our collections of clay and stone pipes, and bird amulets (so-called) were much superior to any I saw elsewhere. We made no exhibit of pottery beyond that of numerous fragments bearing characteristic patterns, as it was deemed not well to risk possible injury to perfect or nearly perfect specimens in transit, and for the same reason we took only one skull—a remarkably sound one.

Our archæological exhibit received an award of diploma and medal.

ADDITIONS TO THE MUSEUM.

Aside from the main object of making this exhibit, namely, to show the world what Ontario has done in the field of archæology, it was hoped that some advantage would accrue to the Institute from donations and exchanges. In this hope we have not been disappointed, although the results have scarcely come up to my own expectations. For any partial failure in this respect two principal reasons may be assigned: first, the lack of constant attendance on the exhibit by some one possessing a lively interest in the subject, and second, the efforts that were made to secure everything of this kind for the newly organized Columbian Museum in the City of Chicago. Despite these drawbacks, however, we have added several hundreds of exceedingly desirable specimens to the museum of the Institute. By exchange for mineral specimens, chiefly crystals of apatite, pyroxene, scapolite, titanite, zircon, etc., the property of the Institute, and provided specially for this purpose, we have become the owners of many excellent articles from Illinois, Ohio, Wisconsin, Tennessee, New Mexico, and France. In numerous instances it was necessary to accept only promises from those who coveted our exchange material, but there is little doubt that we shall yet realize from these to a considerable extent, if not fully.

We were especially fortunate in being able to procure by purchase for a comparatively small sum, what is, without doubt, the best collection of ancient Mexican relics in British America. Some of the objects are, indeed, equal to the best of their kind in any museum in the world. I shall not venture here to pronounce these specimens as Aztec, Toltec, or Maya—the ground is too debatable, and my own footing is insecure, but for ease of reference they may be spoken of as Aztec.*

They form a collection brought together by a gentleman of scientific tastes—a mineralogist—during four years' travel in Mexico. Adopting archæology, as do many persons geologically-minded, he was able to bring to bear more than an average amount of intelligence in making the collection, and this is quite a *desideratum* in a country where the manufacture of "antiques" is not unknown. The total number of specimens is about six hundred, and in every case the locality has been carefully noted. In material they consist of clay or terra-cotta, stone of various kinds, shell, and copper, the last being represented, however, by only one article, a very good axe. The terra-cotta objects are most numerous, and comprise human heads, statuettes (probably idols)

---

*I have no faith in the Toltec theory and have much pleasure in quoting the following from Dr. Brinton, than whom one could hardly wish for better authority: "I omit entirely from this (Uto-Aztecan) group, the Toltecs and the Chicimecs. These were never tribal designations, and it is impossible to identify them with any known communities. The Toltecs may have been one of the early and unimportant gentes of the Aztecs, but even this is doubtful. The term was properly applied to the inhabitants of the small town of Tula, north of the valley of Mexico. In later story, they were referred to as a mythical people of singular gifts and wide domain. Modern and uncritical writers have been misled by these tales and have represented the Toltecs as a potent nation and ancestors of the Aztecs. There is no foundation for such statements, and they have no historic position."—*The American Race*, p. 129.

and dishes of many shapes. The heads are from one inch to three inches in diameter; the statuettes from two to ten inches in height, and the vessels from two inches to upwards of a foot high. Some of the stone specimens are quite massive —the largest one stands twenty-six inches high, and the heaviest must weigh about thirty pounds. Most of the large stone objects are carved in human form (idols perhaps) and in various positions—standing, kneeling, sitting cross-legged, hands on knees, and in other attitudes. The stone of which these are made is mainly a porous, tufaceous-looking substance, but in some instances it is of close-grained quality, and correspondingly heavy, as, for example, in the case of an enormous frog fourteen inches in length, no doubt also an object of worship. An exceptionally fine piece of carving is that of a human figure nearly a foot high seated in a sort of Buddhistic position. The body inclines forward, the legs are crossed, and the hands rest on the knees. The features are fairly well brought out, (the nose is very prominent), and the head-dress is so perfectly carved that one may see here not only a fashion of the time, but even the mode of fastening the article on. Similar remarks apply to a somewhat elaborate necklace, or collar, the knot of which at the back is worked out in detail. One of the most remarkable specimens is, perhaps, representative of Quetzacoatl, one of the chief Aztec deities. It is simply a coiled snake showing the ins and outs of the convolutions, with the head lying at rest on the top. Another stone object is upwards of a foot high, and about nine inches in diameter. In general outline it resembles a sand-glass, or, still more closely, an old-fashioned wooden egg-cup, and like it, too, is hollowed at both ends. The outside is covered with knobs or bosses, except where a human figure is carved.

Not the least valuable portion of this collection is a small quantity of obsidian arrow-heads, and "sacrificial knives," so-called, and three cores of the same material from which flakes have been struck off.

Only reference can now be made to such other objects as counters, spindle-whorls, masks, whistles, and rattles. It would require a good-sized volume to describe and illustrate the whole of this valuable collection. Of but one piece have I cause to entertain even the faintest suspicion, and in this case my suspicion amounts almost to a certainty. It is of a large, and eminently venerable looking pipe—at first sight; but the more I examine it, and the more I think about it, the more I am convinced that it has no relationship to the other objects in the collection—it is an intruder. It would have been strange, indeed, had not the ancient Indians of Mexico arrived at a knowledge of the use of tobacco, and it is quite certain that they had, but they do not appear to have employed it to anything like the same extent as their northern congenors did, and I have yet to find any reference to an Aztec pipe, otherwise than in the form of a bamboo tube.

By exchange we have added to our pottery collection thirty-eight very good specimens of Puebla and modern New Mexican Indian manufacture, and one excellent specimen of the Cliff-dwellers' handiwork. The Puebla vessels are in almost every case perfect, and vary in size from two inches in diameter to nearly fourteen. Three of them are quite black, and provided with handles extending across the top and are said to be of Zuni make. Those of more recent production are small, glazed, and tawdry-looking even when compared with the commonest-looking specimen of older type.

The most recent addition to our pottery consists of three pieces of modern Mexican make presented by Mr. Allan Cassells.

Each year adds to our difficulties in finding room. At the present moment some of our most valuable material is devoid of proper protection.

NOTES.

This very remarkable object (fig. 1.) idol, in all probability, is a little over a foot in height. As is usual in Aztec representations of the human figure, whether in stone or in clay, the head is more carefully worked out than any other part. In this case even more labor has been expended on the head-dress than on the face, although the latter is not devoid of expression. No attempt has been made to form the eye-balls—two simple hollows represent the eyes. Somewhat more care has been expended on the mouth, although the lips are crudely brought out. The nose, however, is fairly well carved, the exterior of the nostrils being quite marked, but without corresponding hollows underneath. On most Aztec carvings the ears are not only conventionalized, but are nearly always represented with a superfluity of ornamentation. Fig. 1 is no exception. A plain cap covers the head, and over the cap is a fillet worked into an elaborate

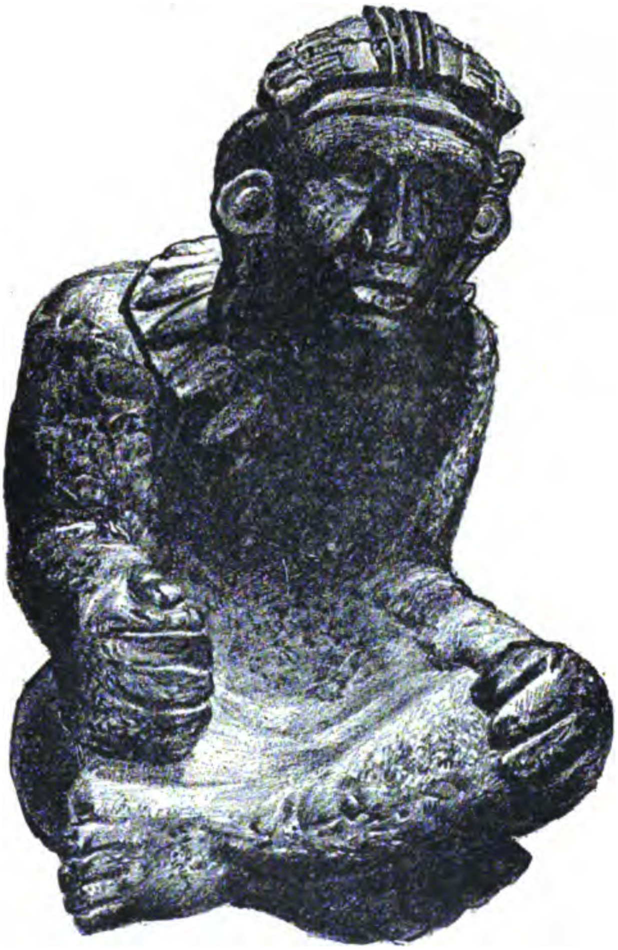


Figure 1.

double knot with fringed or tasseled ends above the forehead. The only other article of wear is a broad necklace which is apparently intended to represent a series of long, ovate beads attached transversely to a band, in front of which hangs a gorget or pendant, that may be described as stellate. The engraving brings this out very clearly.

The legs are crossed and the toes are roughly outlined. The left hand grasps the left knee, and the right hand, closed, rests on the right knee. The hollow or lap appears to be worn, as it is much smoother than the more exposed parts. This specimen was found at Chilpacingo, Mexico.

This figure (fig. 2) is considerably weathered but fortunately not enough so as to destroy the tolerably good, general effect. It represents a man seated—his elbows resting on his knees, and his hands supporting his head. As in figure 1, the eyes are mere cavities, and the mouth is little more than another hollow except that there is an effort made to show an under lip. The nose and cheek-bones are prominent. The hands are either unfinished, or they are finished very badly, both as to shape and proportion. The fact that the feet and part of the legs are lost, gives the figure a forward inclination which originally it did not possess. The shoulders, back, and hips are formed with some pretensions to anatomical accuracy.

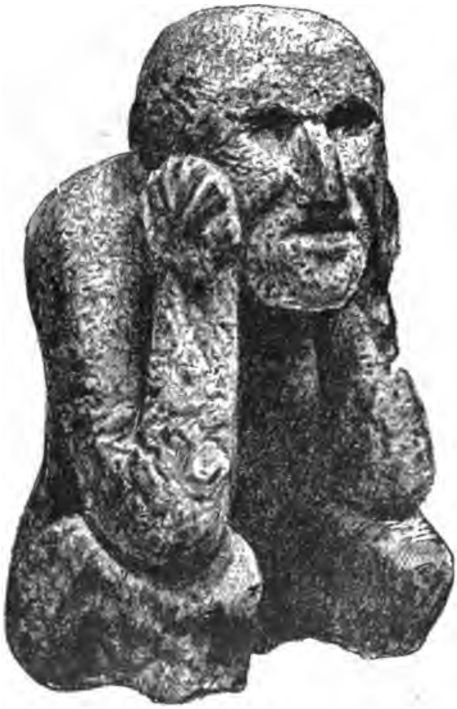


Figure 2.

It is not unlikely this also was an idol—perhaps, however, is was only an architectural ornament. In either case it is a good specimen of Indian art in stone. With several other relics this was exhumed at Oaxaco.

The large stone frog (fig. 3) is no doubt an idol. At all events it is known that this animal was an object of worship among the ancient Mexicans, as in one place an immense, square temple was erected in its honor. This remarkably fine specimen is proportionately carved, while some attention has been given to anatomical details. The work, in fact, is quite as well done as if from the hands of a good modern stone-carver. The position is natural, and the expression has been fairly well caught. The stone is soft but close-grained, and of a light pink color, but not of such a deep tint as the exterior would indicate, as it is evident that the whole surface has been at one time coated with some reddish pigment, probably hematite. A considerable portion of this coloring matter is still adherent to the under surface of the neck. Locality, Ameca-meca, Mexico.

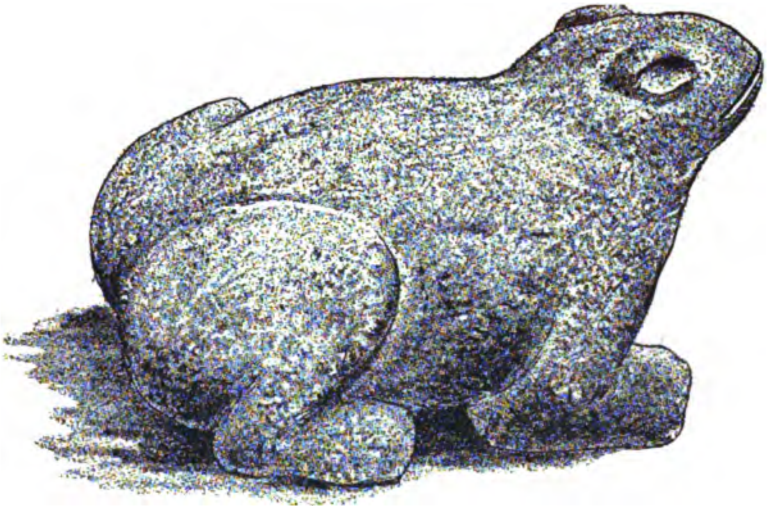


Figure 3.

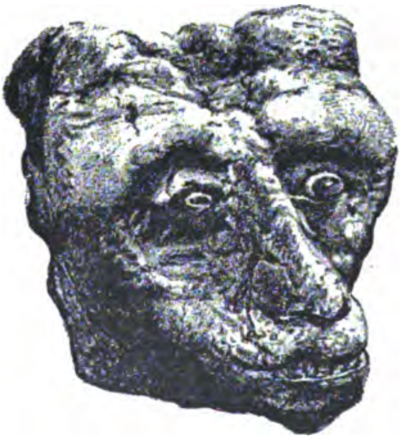


Figure 4.

One of the most artistic pieces of stone carving in the collection is here represented. It is supposedly the head of a mountain goat (fig. 4) if one may judge from the re-curved horns. Notwithstanding its undoubted great antiquity and consequent destruction of fine lines, it still shows marks of very superior skill on the part of the Indian artist, for it is really a work of art. The features are boldly carved—the eyebrows and eyes prominent, and it is particularly observable that the eye-balls have been "picked out" or indented in order to give expression to the face, in the manner of modern sculpture. So carefully have the details been attended to that the nostrils and teeth are still clearly discernible. In all likelihood this head was a piece of architectural decoration on some building in Oaxaco, where it was dug up, for although the back surface has a rough and unfinished appearance, it does not give the impression of having been fractured from another piece.

As a specimen of clay-work the vessel here illustrated (fig. 5) is peculiar. It is six inches in height, with an inside diameter of two and three-fourth inches but not truly circular. It is of a dirty grey color, of very close grain and exceedingly hard. At first sight it might be taken for stone. The sides are straight and plain, except the portion shown in the cut, on which has been moulded a grotesque and semi-human figure. It is impossible to describe this curious combination of man and beast. The head has some resemblance to that of a pug-dog with the addition of horns. The whole of the trunk is semi-globular. A plain band is shown round the neck, and to this band is attached a comparatively large pendant, the upper edge of which touches the chin. The knees and legs are half covered lengthwise with an apron which descends nearly to the feet, and between this apron and the body of the cup behind is an open hollow three-fourths of an inch wide. One of the peculiarities of this figure is the form given to the feet and hands (one of the latter is broken,

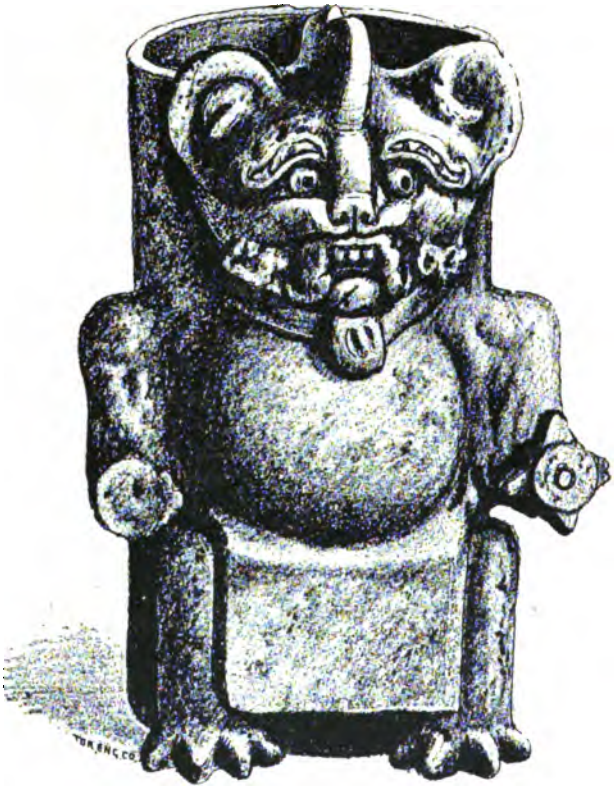


Figure 5.

but it was no doubt like the remaining one) the fingers and toes in each case being made like a four-pointed star. It will be observed that the eye-balls are punctured to give to the face a life-like expression. An examination of these holes affords a clue to how the vessel was constructed. A pin can be passed through them to the depth of fully an inch, or until it touches the side of the vessel at the back. The inside of the figure is, therefore, evidently hollow, and the figure itself has been constructed on a formerly made cup. Our collection contains several specimens of similar hollow ware.

Tlaloc, the god of rain, was sometimes, it is said, set up near bodies of water, and carved on drinking-cups. It would also seem to have been the custom to represent him in the most hideous of forms. On these grounds we may be warranted in assigning this figure to the rain-god of San Cristobal where the cup was discovered in 1891.

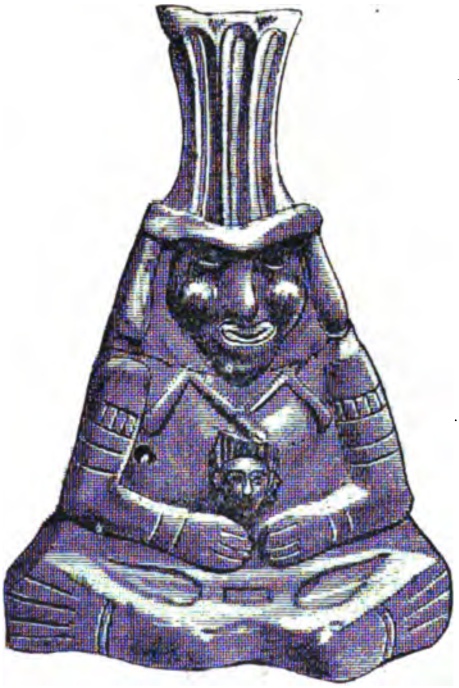


Figure 6.

Figure 6 is in terra-cotta, and gives a good idea of Aztec plastic art. It is exactly twelve inches in height, fully one-third of which is required for the head-dress. The face is wholly unsymmetrical, and the features are quite unlike the normal type, indeed they are not nearly so well formed as are those of the head modelled on the body underneath. It was therefore not for want of ability on the part of the workman, that the face has been so moulded. Most of the noses on Aztec figures are aquiline, many of them highly so, but in this case the nose is a decided pug. The eyes are semi-lunar depressions of unequal size, the cheeks are very prominent, and the mouth is formed by a curious arrangement of depressed lines, higher and more extended towards the left side than the right. A necklace shows three long pendants, the middle one resting on, and curving to the front of the small head underneath. The markings on the arms and wrists probably represent armlets and bracelets rather than ornaments on clothing as the arms appear to be quite bare otherwise. These limbs are not of equal length, no thumbs are shown on the hands, and the fingers are barely indicated by lines. The legs and feet (the latter with four toes each) are little more than a pretence to form a base, and are represented in an impossible position. The markings on the lap are probably only ornamental. The small head is well formed in every respect. One side of the head-dress has been knocked off. Locality, La Silleta, Mexico.

It is difficult to say what purpose this doubly hollowed stone (fig. 7) vessel served. Should its age be at all commensurate with the rudeness of its workmanship, it must be old indeed. It has been carved from a highly ferruginous tufa so porous that it does not lend itself to the production of details. In height it stands nearly fourteen inches, and is hollowed to a depth of four inches at each end, the cavities being from seven to eight inches in width at the mouth, and the lips from an inch to an inch and a half thick. Four rows of bosses relieve the exterior of the two ends, and the body of the vessel is reduced in the centre to a diameter of four inches and a half. A rudely carved human figure has been formed on one side, with a disproportionately large head, within what looks like a hood. One arm is raised till it meets this head-dress, and the other rests on the hip. Enough of this figure remains to show that it was never a fine piece of work. It was unearthed at Tlayacaque.

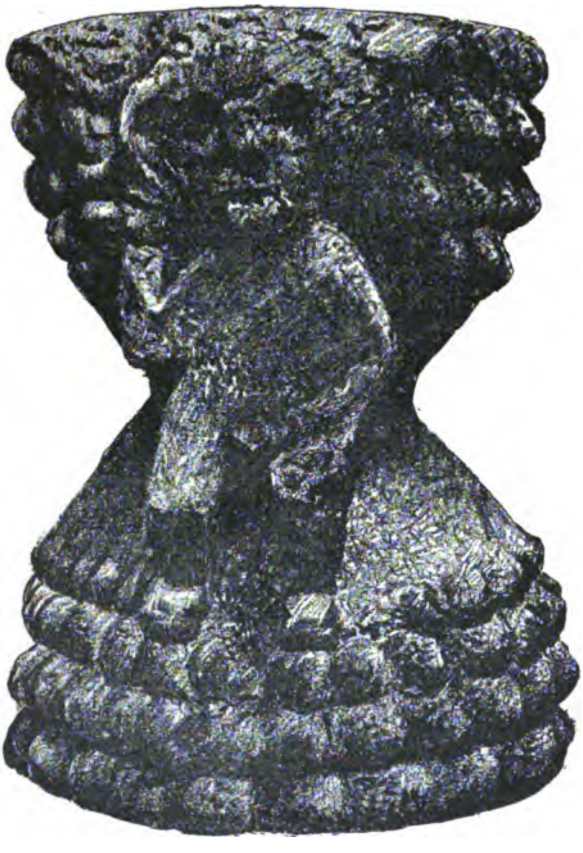


Figure 7.

LANARK COUNTY.

By Dr. T. W. Beeman.

The writer had very few opportunities to make any archæological researches during the past summer, and the specimens sent to the museum were obtained for the most part from persons in whose possession they had been for some time.

Only a very few days were spent in actual work, and those days did not yield much. One reason was the unusual height of water on Rideau Lake. We were waiting all summer for low water, but in vain.

While the whole of this district, Lanark county and surrounding country, affords a rich field for the study of the aborigines, the Rideau Lake yields by far the greater number of specimens.

The lake is five or six feet higher than it was when the Indians fished on it, hunted around its shores and lived in their villages in its vicinity.

Where the Tay river empties in the lake, there was, without doubt, a village site that must have been occupied for a great length of time, as the specimens from this place show many different varieties of pattern and great differences in their age.

This place gives more indication of having been a permanent village site than any yet discovered, but so far nothing has been found in the way of earth-works, burial places, or anything of that kind. No careful search has yet been made for earth-works or any permanent structure, and for the reason given above. The water in the lake being five or six feet higher than it was, has converted the surrounding part into a marsh. The greater number, in fact, all the specimens secured from this place, are found right at the water's edge, where they have been washed up by the high winds in the fall or spring, or else washed out of the banks by ice shoving and the action of the water.

The fragments of pottery from this locality are very numerous, but no large pieces are ever obtained. Some of the pottery is comparatively recent and others show a much older appearance.

The bulk of the specimens of flint and slate are neolithic, but fair specimens of chipped stone are not wanting. In most of the chipped specimens found, it was evident that either with intention or from convenience in making the utensil, the maker worked from one side, as, in order to produce a cutting edge, after he had finished one side, he turned it over and worked the other edge in the same way, producing a weapon or tool that in cross section would appear rhomboidal. So far as my observation has gone, this appearance is shown on all the older specimens.

One large celt was found on the shore of the lake twelve or fourteen inches long, and a perfect specimen. It is the largest specimen ever obtained by the writer. Gouges are found more frequently by the water's edge than away from the water. Should this fact in any way account for the use the gouge was put to?

In a former report, mention was made of the absence of implements of bone. This has still been our experience since that time, and it has often been a cause of wonder why it should be so, when other localities yield more or less bone specimens. But one or two pipes have been found, and they were not carved in any way, and no doubt were used more in ordinary life than for any ceremonial event.

One very peculiar polished slate specimen was found in the township of Bathurst on the farm of Edward McDonald, Esq. In cross section, it is bayonet-shaped, one end of it being pointed, the other, chisel-shaped. Had the material been harder, it would seem as though it had been intended for a chisel, but being of slate, it is difficult to suggest what great practical use it had. And yet it must have been intended for some practical purpose, as it was well shaped and beautifully finished. Fortunately, this specimen is in a perfect state of preservation.

A combination of chisel and gouge was secured from Cyrus Davis, Esq., township of Elmsley. The specimen is not in a very good state of preservation, but there is quite sufficient to show that one end had been used as a chisel and the other end as a gouge. This combination of two tools in one would suggest that one of the uses of this tool was working in wood.

During the year many places have been heard of that the writer would like very much to visit and search for indications of Indian occupation, but so far the opportunity has not arisen. On all of the principal streams and lakes of this district there is plenty of good ground that would well repay a careful search.

Under existing circumstances, we can only hope that the future may offer more and better chances to do some work.

One good result of the work that has been done here is the awakening of more general interest in the subject than existed formerly, as it is very seldom that anything of interest is found or noted that the writer does not hear of it soon after, and in almost every case finally secures the specimens for the museum.

No burial places of any size have as yet been discovered, but it by no means follows that they do not exist. In many places in the county small burial places have been found in the past, but none of these have come under our notice.

A few good specimens were obtained from Jones' Falls. Among them may be mentioned a large spear of black flint, in a very good state of preservation, and a red slate amulet with two perforations.

These specimens were brought to me by Mr. Jack Stewart, and it is to be hoped that other interesting things may be secured from this place.

Among the flints were a few of the leaf-shaped variety. One in particular was worthy of mention, as the smaller end was carried out to such a small point as to suggest its possible use to have been a perforator.

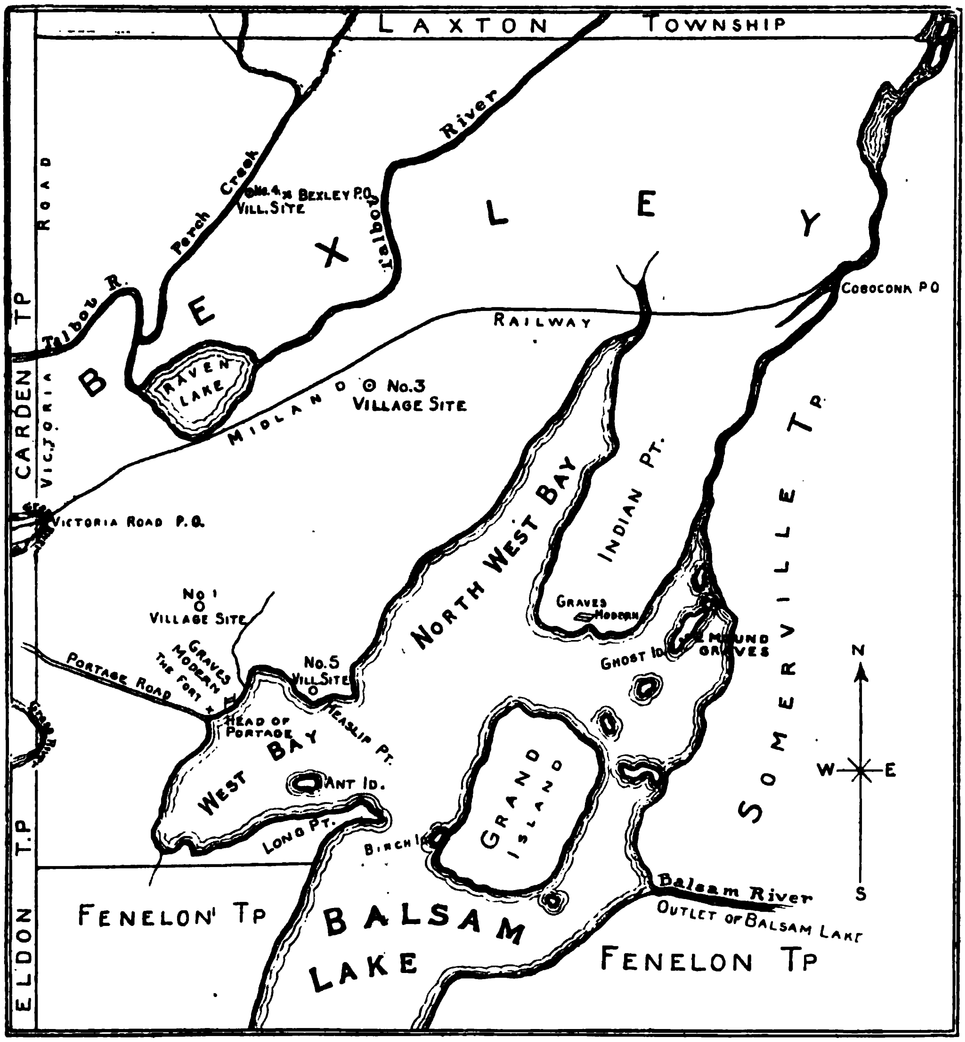
We hope to be able to give a much better report of the work done in this county during the year 1894 than for the year just passed.

Perth, January 29, 1894.

SPECIMENS RECEIVED FOR CANADIAN INSTITUTE, WITH NAMES OF DONORS.

Steatite pipe, Lake Rideau, George Hone, Rideau Centre.
Flint spear, large, Lake Rideau, George Hone, Rideau Centre.
Flint spear, large, black flint, Jones' Falls, Wm. Mason, Jones' Falls.
Red slate amulet, Jones' Falls, Wm. Mason, Jones' Falls.
Sandstone pestle (?) Jones' Falls, Hugh Glover, Jones' Falls.
Rudely chipped slate knife, Rideau Lake, John Coutts, Rideau Centre.
Slick-stone, Rideau Lake, David Lepper, Perth.
Gouge, large, Rideau Lake, David Lepper, Perth.
Celt, large, Rideau Lake, T. W. Beeman, Perth.
Gouge, Lake Mississippi, D. McKeown, Innisville.
Gouge, Bathurst township, Chas. Paget, Wemyss.
Celt, Lake Mississippi, D. McKeown, Innisville.
Celt, Jones' Falls, Robert Maxwell, Jones' Falls.
Slate chisel, township of Bathurst, Ed. McDonald, Wemyss.
Two flints, township of North Burgess, Peter Bennett, Stanleyville.
Flint arrows, Rideau Lake, Master Willie McLaren, Perth.

Leaf-shaped flint, township of Drummond, J. W. McIntyre, Balderson.
Leaf-shaped black flint, township of Drummond, D. McKeown, Innisville.
Small celt, township of Drummond, D. McKeown, Innisville.
Slate knife, Chas. MacKay, Fallbrook.
Arrow point, Lake Rideau, Ernest Jamieson, Perth.
Chisel gouge, township of South Elmsley, Cyrus Davis, Perth



BALSAM LAKE.

By Geo. E. Laidlaw.

In the spring of 1891, I visited the village site, No. 5, on Heaslip's Point, Balsam Lake, Lot 3, N. W. B. Bexley, and found fragments of pottery, pipes, bone awls, etc., clam shells, skinning stones and a very small clay pipe. There are four or five mortars made in the tops of boulders protruding from the soil. Two especially are well defined, being about two inches deep and about twelve inches in diameter. I have not heard of any relics showing traces of contact with the white men being found there, though lots of relics have been picked up. As the ground is very poor near the rock the occupants may have subsisted without cultivation. In the vicinity there are a great many wild plum and cherry trees, grape vines and butternuts, which may be descendants of those planted by the Indians. As the water of the lake has been raised about six feet, it probably covers many camp sites, the shores being very shallow.

Later on I visited a village site, No. 4, on lot 9, concession 3, Bexley, near Bexley P. O., six miles north from the old Portage and four and a quarter miles west of North Bay, Balsam Lake. Traces of graves, ash-beds or hearth-places exist here—the graves were single and in rows. Among the relics picked up fragments of pottery of the usual patterns, and pipes of the usual types of this section, bone awls, perforated clam shells, bone arrow-heads, a stone pipe and a stone disc. This site is in the bend of a large creek flowing into the Talbot River, which flows into Lake Simcoe. Soil in this locality a sandy loam suitable for the growth of corn, beans, pumpkins, etc., and other vegetable foods.

On this site also, no relics showing traces of contact with the white men were found. I enquired strictly on this point. The traces of the village are almost completely erased by cultivation.

In the following summer I made a thorough examination of a village site, No. 3, which I had cursorily examined the previous year. This village site is situated on Corbett's Hill, lots 4 and 5, concession 4, Bexley, four miles north of the old Portage road, one and three-quarter miles west of North Bay, Balsam Lake, and two and one-half east of village site No. 4.

That this was a principal town the following will tend to show remains of separate habitations, as evinced by traces of ashes and the generally dark-colored spots of twelve to twenty feet in diameter, produced by the decay of organic matter, were to the number of seventy-five or eighty, and covered an area of five acres, roughly guessing.

A graveyard lying to the north on higher ground, consisted of separate graves in single rows. Some opened some years ago disclosed skeletons in a sitting or crouching position, but no relics. The exact position of this graveyard cannot now be determined without exhaustive research, owing to twenty years of cultivation.

Innumerable fragments of pottery of the same patterns as those found on adjoining sites were gathered together, with bone and horn implements, clay pipes, perforated mussel shells, stone and pottery discs, skinners, stone pipes, etc., fragments of burnt bones and horns, and bears' teeth.

The soil in the vicinity, though stony, was quite fit for the cultivation of such cereals and vegetables as the aboriginies grew.

Two large springs existed at the bottom of the western slope, and were probably one of the primal inducements to build a town there. As this site is situated midway on the height of land and a little north of the shortest distance between Raven Lake—an expansion of the Talbot River—and Balsam Lake, distant from each other two and one-quarter miles, it commanded the approaches on both sides of the divide to and from the Huron country, if indeed the Hurons existed at the time this village was occupied.

The western slope is very abrupt. A far western view can be obtained from the summit of the divide. Smoke signals from the hills near Lake Simcoe could be discerned and repeated to other localities. The eastern view is intercepted to some extent by a higher cluster of isolated hills, a spur of this height of land. From these hills, especially, smoke signals could be seen miles in any direction, and they furnish the best point for observation of Balsam Lake from its western side.

This village is also directly opposite the outlet of Balsam Lake, which is on its eastern side, and this is a strong fact to determine it to be on one of the main routes through the country.

The other trail, about four miles south of this, from West Bay to Lake Simcoe, was overland and was seventeen miles long, and on the northerly trail two and a half miles was the portage, which was quite a factor in the Indians' reckoning as it saved a lot of portaging.

Parkman says that Champlain went from the Huron country to the Bay of Quinte with a large party of Hurons to attack the Iroquois in 1615, and it would be interesting to know which route he took. If he intended to use the same canoes all the way that he started with, from the west side of Lake Simcoe he would naturally ascend the Talbot river and portage across the divide near this village site.

If, on the other hand, he expected to get canoes at this lake, he would proceed overland by the long portage to West Bay. I am inclined to think he followed the first route, for, evidently, these towns were forsaken before Champlain's time and the country depopulated or uninhabited by reason of fear of the Iroquois, so thus he would have to depend on the "material" he would start with. It was obvious he could not detain his party *en route* to manufacture enough canoes for so large a party as he would have.

That this section of country was depopulated at that time is believed to be so by the fact that the Jesuits make no mention of any large centres of population. If these had existed there would have been Jesuits there to propagate the teachings of the Catholic Church, as they did elsewhere. And that these villages did not exist since the Hurons' time is shown by the fact that as yet no traces of contact with white men have been found on four known and explored sites in this township. See page 77, 4th Report.

The solution of the problem of who erected these towns and inhabited them may be left to conjecture. What is beyond doubt is that they existed previous to the advent of the French, and with these may be classed the sites on waters east and south of here, though these would need to be thoroughly examined before opinions could be given.

It is not definitely known how the Hurons got to their country. They were there when the French came and were akin to the Tobacco nation to their immediate west, and to the Neutrals to the south-west, and were of Iroquois stock. If they came from the east they probably occupied this region for a period in their westwardly drift; or they may have come into their own country from the west, conquered this people, and assimilated the survivors at a period previous to their being known to the whites.

This region may have been the westerly limit of the Hochelagans, who, according to Dawson, inhabited the Island of Montreal and the country to the north and west of the St. Lawrence. From this tribe the Hurons may have sprung and survived.

It is known that the Hurons and Iroquois were of one common stock. Having become separated by time and distance, they appeared as two distinct nations at the time of the arrival of the French. So much so that there was bitter enmity between them, which ended in the extermination of the Hurons, as they —the Hurons—had probably exterminated the inhabitants of this region before they themselves were attacked by the Iroquois.

The region in question will stand a great deal of investigation, as it extends from here to the Ottawa river, and as far south as Lake Ontario.

Numerous details of the implements, ornaments and burials, while showing affinity to those of the Hurons, present some features which are totally wanting among those of the Hurons, but exist further east. However, these are not vital points. The main object is to gather these relics and facts and remit them to some place where they can be compared and studied.

A short description of some relics from this locality, found since 1890, and of others from a distance is as follows:

The slick-stone, No. 112, was found near the Portage road. Length eight inches; diameter, one and a quarter inches; of a fine-grained grey material, polished. Its shape would lead one to believe that it was intended for a pestle or muller, but the ends show no abrasion, though on one end—the thickest—it has been worked to a hand-hold, with a slight shoulder about one-third down the length.

No. 84 is a skin dresser made of elkhorn—Alberta territory—length thirteen inches—with a projection.in the shape of a duck's bill at right angles. Length of projection two and a half inches; diameter of main part one and a half inches.

The end has a hole bored in it with part of a buckskin thong attached, and, in a worked depression two inches from the end there is another hole bored.

No. 20, a stone ball, dark brown material, very light in weight, found on village site No. 3, Bexley. This may have been used in some game or as a charm, as it is too small or light to be used as a weapon attached to a handle or thong.

No. 12 is an unfinished implement of some sort. It may be a gorget in process of manufacture, or it may be a fragment of one of those slate spears, roughly blocked out. Bexley township.

No. 11, roughly blocked slab of slate.

Nos. 110, 111. Bexley township. No. 110, three inches long, one inch wide; village site 4. No. 111, from the Portage road.

Nos. 108, 109. Two celts. Balsam Lake.

No. 19, modern type from Edmonton, taken from a grave with scalping knife. Height of bowl one and a half inches; diameter of bowl three-fifths inch; length base one and three-tenth inches; diameter stem hole two-fifth inches. There is a ridge or keel projecting from the bottom one-fifth inches in depth.

No. 12 is another modern pipe from Alberta. Height of bowl 1½ inches. A well defined rim around top and a neck at the junction of the base. Diameter of bowl three-fifth inches: length one and three-fifth inches; diameter of stem hole one-half inch. A deeply incised oblong is at each side of the base. Instead of a keel there are two perforated projections for its attachment to the stem, or, probably, of ornaments.

No. 17 is a rare specimen of unfinished work and proves in one case that the pipe is modelled first, before the holes are bored. This specimen is the vase type and is symmetrically perfect. Locality, Coboconk. Height one and three-fifth inches; diameter of body of pipe one and one-fifth inches; width of flare one inch; hole, three-fifth inches wide, seven-tenths inches in width; stem hole is just started and is three-twentieths of an inch in diameter and three-twentieths of an inch deep.

No. 16 is a four sided stone pipe of irregular shape, grey soapstone, criss-cross lines on all sides. Length of pipe one and a quarter inches. Stemhole midway down one side, and there is a small hole at the bottom of the pipe on the side farthest from the stemhole. The bowl had been excavated, then a small hole drilled to meet the stemhole. Locality, village site No. 4.

No. 18 is a very unique specimen of an unusual shape. It is of dark material. steatite, highly polished, though it shows marks of hard usage. Present length two inches; diameter body of pipe four-fifth inches; diameter of flare one inch. The small stemhole is bored upward. In the middle of pipe a perforation through the bottom formerly existed, no doubt to attach the stem to; it became broken and the owner cut a deep groove around the pipe to hold the fastening cord. I think this serves to show that in the majority of cases these holes at the lower extremity of stone pipes were used to fasten the stems securely and not to attach ornaments. The bowl has the peculiarity of being in two parts. The top excavation was a rounded hollow of two-fifth inches in depth, four-fifth inches in width. From there to the upwardly inclining stem hole a tapering shaft extends of three-quarter inches in depth, one-fifth inches in diameter, tapering to a point at its juncture with the stem hole. So one can easily see the difference of three-fifth inches in the two borings. I call this the "cigar holder" pipe. Locality, village site No. 3.

No. 21, the fragments of a pipe from the north-west coast. Must have been eight inches at least in length. Main features, man's head bowl. See Fig. 26 Canadian Institute Report for 1887. Long slender stem, surmounted by a "beastie" carved separately, of which the head is turned backwards, looking toward the smoker; well defined legs. Material, the usual stone from the north of Queen Charlotte Sound.

No. 68. Very small clay pipe. Length of bowl one and a quarter inches; diameter three-fifth inches. Shows very rough usage. Locality, village site No. 5.

No. 70 is another diminutive pipe. Length 1 inch; diameter three-fifths inch. Village site No. 4. These may have been attempts by children, or can be classed as "toys." Both are plain—no ornamentation. See Figs 9, 10, Canadian Institute report, 1891.

No. 70 A is a rough pipe that has had the top broken and ground down level.

No. 71. Fragment of a bowl with flare in the shape of a square; corners slightly turned up. Fig. 7, Canadian Institute report, 1891.

No. 72. A very rough pipe evidently made in a hurry; heavy stem, rough shallow bowl; shows lack of finish.

No. 73. Small specimen of the cornet pattern; projecting lip inwardly.

No. 74. Fragment of stem showing ornamentation of three longitudinal ridges, surrounded with dots.

No. 14. Pottery disc from village site 4.

No. 15. Stone disc two-fifth inches thick; one inch diameter. Village site 4.

No. 16. Stone disc three-tenth inches thick; three-quarter inches diameter. Rough ore material. Village site 4.

No. 17. Stone disc one-quarter inch thick; one and one-quarter inch diameter. A perforation has been started from each side, and although each hole is more than half the thickness of the disc in depth, not being opposite each other they did not meet.

No. 8. Pottery disc. Village site No. 3.

No. 19. Small stone disc. Village site No. 3.

No. 1, 2. Perforated shells. Village site 3.

No. 3. Perforated and showing use or wear, with a fragment broken out Village site No. 4.

No. 76. Tine of deer horn; end ground down. Village site No. 4.

No. 77. Arrowhead of bone. Length two inches. Village site No. 4.

No. 78. Hollow, worked bone. Village site No. 4.

No. 79. Bear tusk. Village site No. 4.

No. 80. Worked bone with knob on end. Village site No. 4.

No. 81, 82. Awls. Village site No. 4.

No. 83. Awl. Village site No. 3.

No. 74. Awl made from bird's bone. Village site No. 5.

No. 75. Partially sawed bone, showing marks of workmanship. Village site No. 5.

No. 86. Hollow bone. Bexley.

No. 242. Horse-shoe shaped scraper.

No. 248. Small circular scraper.

Nos. 243, 244. Two arrowheads. Colorado.

Nos. 246—247. Three diminutive arrowheads.

These last seven implements are from Colorado and are remarkable for their finish, symmetry and material.

Nos. 130, 181, 182, 184, 188, 201, 238, 239, are arrowheads from the head of the portage, Balsam Lake.

Nos. 240, 241, 249. Scrapers from the same place.

No. 25. Implement roughly blocked out. From the same place.

This spot is the only place where arrowheads, etc., of flint are to be found, the inhabitants probably using bone and horn to a large extent.

Now comes a series of chipped flint implements from Texas, numbering 68. This series contains awls, fish-jiggers, arrowheads of common types, spear heads, rudely worked paleoliths, scrapers, flakes, knives and other implements.

All are chipped to a cutting or shaping edge, no matter what shape they are.

The specimens of pottery are from the three mentioned village sites, and are of the usual patterns incidental to this locality, of which very good representations can be seen on pages 26, 27, 28, Fourth Annual Report Canadian Institute. These ought to be kept separate for purposes of comparison.

No. 12 is a knife, modern, taken from a grave at Edmonton, N.W.T., with pipe No. 19.

No. 20 is a mortar of a size suitable for being carried, found in 1891, on Grand Island, Balsam Lake. Size of depression seven inches by eight inches, by one inch in depth. The block of stone which contains the mortar is of a flat, irregular, four-sided shape, eighteen by eight inches, three and a half inches deep. Was probably selected and broken off a larger stone, on account of its being composed of a slab of black material lying on a slab of reddish-grey material, the black or upper containing the mortar and being smaller than the base. The rest of the upper surface is worn flat and polished, perhaps by the use of grinding tools.

Village site No. 1, on Rummerfield Hill, lot 1, N. P. R., Bexley.
" 2, " Logan's Hill, Eldon.
" 3, " Corbett's Hill, lots 4 and 5, con. 5, Bexley.
" 4, " Bexley P. O., lot 9, con. 3, Bexley.
" 5, " Heaslip's Point, lot 3, N. W. B., Bexley.

No. 1 is north of Portage Road, one mile.
No. 1 is west of West Bay, Balsam Lake, one mile.
No. 3 is north of Portage Road, 4 miles.
No. 3 is west of North Bay, Balsam Lake, one and three quarter miles.
No. 3 is north of No. 1, three miles.
No. 4 is north of Portage Road, six miles.
No. 4 is west of North Bay, four and a half miles.
No. 4 is west of No. 3, two and a half miles.
No. 4 is north of No. 1, five miles.
No. 5 is north-east of head of Portage, one mile.
No. 5 is east of No. 1, two miles.
No. 5 is south-east of No. 4, six and a quarter miles.
No. 5 is south of No. 3, three and a quarter miles.

Oct 19-1908

ARCHÆOLOGICAL REPORT

1894-95.

BY

DAVID BOYLE.

APPENDIX TO THE

REPORT OF THE MINISTER OF EDUCATION

ONTARIO.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, &c., 68 AND 70 FRONT STREET WEST.
1896.

CONTENTS.

PAGE.

Presentation 5
Assessions to the Museum 7
Primitive Industries and Working Methods 29
Ontario Earthworks 33
    Waterloo 34
    London 35
    North Dorchester 37
Shallow Pits 40
Mud Lake Embankment 41
Ossuaries 41
    Syer's, Manvers 41
    Fallis's, Manvers 42
    Bowman's, Flos 42
Reported Stone Channels 42
Supposed Stone Wall 43
General J. S. Clark's work 43
Rock Paintings 44
Rock Paintings at Lake Massanog 46
Other Rock Paintings 50
Lanark County 51
    Lake Rideau 52
    Squaw Point and Plum Point 53
Flints 54
Felsite Specimens 56
Slate Tools 56
A Well Worn Adze 58
Clay Pipes 58
Stone Pipes 60
Pendants 62
Gorgets—Amulets, or Talismans 62
Bird Amulets 64
Banner Stones 64
Women's Knives 65
Tubes of Stones 66
Small Handle-Holed Hammer 67
Gouges 68
New Form of Stone Relic 68
Perforated Bone Awl 69
Bone Bangles 69
Indian Armor 69
Dr. Beeman's Report on Lanark County 71
Cave Dwellings 72
Description of Two Caves by R. D. Meyers 73
Short Historical and Journal Notes by David Pietersz, De Vries, 1665 75
    In what Manner the Indians Bury their Dead 77
    How the Indians of the North Arm Themselves 77
    Their Dances 78
    Massacre of Indians by the Dutch 78

ARCHÆOLOGICAL REPORT,

1894-95.

To the Honorable G. W. Ross, LL.D.,
Minister of Education.

Sir,—In presenting you with this report of the Provincial Archæological Museum, it affords me much pleasure to state that the year has been an unusually prosperous one.

Several places were visited for the purpose of procuring correct information relative to earthworks, some of which remain intact. While it is desirable that these should be accurately surveyed, the cost of such work has stood in the way, and I have therefore confined myself to making measurements with the tape-line, taking angles in a rough way by means of a pocket compass, and preparing drawings which give some idea of the outline and proportions of the embankments. Two of these plans appear in this report.

Some noted places of aboriginal occupation or resort have been carefully examined, and numerous valuable specimens have, as a result, been added to the museum.

From one of two ossuaries opened in the township of Manvers, we secured fifty-seven crania; from one in Flos township eight, besides some good specimens of a rare form of wampum, and a few other articles.

One of the most important events of the year's work was the examination of rock-paintings on the shore of Lake Massanog, or Massanaw. This was facilitated through the courtesy of Mrs. McLaren, wife of the Hon. Peter McLaren, of Perth. Mrs. McLaren, who is much interested in matters archæological, not only made all necessary arrangements for reaching this somewhat out-of-the-way locality, but provided every convenience for examining the rude paintings on the rocks that form the shore.

To the same lady special thanks are due for her kindness in placing her steam yacht at my disposal for the purpose of examining a number of interesting village sites on Lake Rideau.

Owing to arrangements made early in 1895 the museum has been thrown more freely open to the public every afternoon during the week, as a result of which the attendance of visitors has greatly increased.

The number of specimens added to the museum since last report is fully three thousand five hundred.

Every foot of available space in the rooms kindly supplied by the Canadian Institute for the accommodation of the museum, is fully occupied—indeed, in many of the cases the specimens are much too crowded, and several rows of cases are so close together that two persons cannot pass each other in the spaces.

It is still to be regretted that the collection is exposed to great risk from fire.

Owing to the large number of recent accessions, a thorough re-arrangement of our material is now an absolute necessity—numbers should be painted on the specimens, and a complete catalogue should be prepared. This work, begun some years ago, would have been kept up but for the reason that the curator was desirous of becoming acquainted with the methods of classification adopted in large museums, before he expended many months of time and labor in doing what might require to be undone in the light of information gained from the experience of older institutions of this kind. Another reason for delay was based on the hope that before long more permanent and commodious quarters would be found for the museum, and that the handling incident to removal would also have served for re-arrangement.

I have the honor to be,
Yours respectfully,

DAVID BOYLE.

ACCESSIONS TO THE

ONTARIO ARCHÆOLOGICAL MUSEUM,

1894-1895.

While we are, as a matter of course, deeply indebted to the large number of ladies and gentlemen who have in one way and another enabled us to add so many valuable specimens since the date of last report, special thanks must be rendered to Prof. G. S. Ramsay, formerly Principal of the University of New Mexico, in Albuquerque, but who now resides at Fresno, California. Prof. Ramsay's gift is a valuable one, as may be seen from the appended list. On learning how desirable it is that we should have material from the New Mexico Pueblo country for comparison with that of our own province and other portions of the continent, he at once expressed his willingness to contribute towards this end, and in due course forwarded upwards of thirty excellent specimens, chiefly of Pueblo pottery, the largest of which is a handsomely formed bowl, eighteen inches in diameter, and nearly a foot in depth. All the other articles received from Prof. Ramsay are as interesting as they are valuable. Other Canadian abroad might do worse than attempt to emulate his admirable example.

Dr. S. H. Collins, of Lawrenceburg, Indiana, must also be numbered among those who have very materially befriended us. He has placed us in possession of his own private collection, numbering upwards of three hundred and fifty specimens, nearly every one of which is choice. The most valuable object in Dr. Collins' gift is a perfect, black clay bowl, bearing a diagonally, incised pattern of eastern slope type. This vessel was made by the last woman of an Arizona tribe, who possessed the art of making pottery according to old-time methods. The specimen is one of six she produced by special request, only a short time before she died. On former occasions we have been indebted to the genial doctor, and now we are more than ever under obligation to him.

To our friend, Dr. T. W. Beeman, and to his assistants, we are very much indebted, indeed ; and we should name also as deserving of thanks, Mr. James S. Cairnduff, Mr. Robert Martin, Mr. Cyrenius Bearss, Mr. J. M. Irwin, Rev. A. G. Morice, O.M.A., Mr. F. W. Waugh, Mr. Hugh Nichol, Mr. C. H. Laidlaw of Agua-calientes, Mexico, Mr. G. E. Laidlaw, of the "Fort," Balsam Lake, and Prof. Carerra, of Los Cruces, New Mexico.

DR. T. W. BEEMAN, PERTH.

One small celt, an inch and three-quarters in length and three-eighths of an inch wide at the lip. This is the smallest specimen of its kind in the museum. Probably a toy. Lake Rideau.

One base of bone arrow-head or spear-head, Lake Rideau.

Four hatchets or celts, Lake Rideau.

Three felsite specimens, rudely chipped, Lake Rideau.

Forty chert specimens, arrows, scrapers, etc., Lake Rideau.

One small disk of Hudson River shale, perforated, Lake Rideau.

One rudely formed quartzite spear, Lake Rideau.

Two fragments of large jasper scraper, or spear, Lake Rideau.

One peculiarly formed chert scraper, Lake Rideau.

One oval bone pendant, Lake Rideau.

Two oval specimens of fine micaceous schist, apparently in preparation for pendants, Lake Rideau.

One bone needle or awl, six inches long, Lake Rideau.

The following is a list of Dr. Beeman's coadjutors with their contributions, mostly from the County of Lanark.

MR. ROBERT BLAIR.

One gouge, twelve inches long.

One large amulet.

MR. GEORGE HONE.

A large number of flints, celts, rubbing-stones, etc.

MR. DICK CARPENTER.

Fifteen flints from Plum Point, and various miscellaneous specimens.

MR. WM. McLAREN.

One felsite implement—very rude.

Twenty-five flints, and numerous specimens of different kinds, including rubbing-stones and slate objects.

MR. R. C. McLAREN.

Four rubbing-stones.

Eighteen flints.

Four celts.

MR. JAMES PETERS.

One slate spear or knife.

One amulet (broken).

MR. DAVID LEPPER.

One double-ended celt or hatchet.

Three common celts.

MR. EDWARD TILT, NEWBURGH.

One flint scraper or knife.

DR. J. P. VROOMAN, YARKER.

One gouge.
One flint drill.

MR. WM. DUNLOP.

Two plain celts.
One tally-stone (slate).

MR. J. W. BORROWMAN.

Three plain celts.
One copper amulet.

MR. JOHN COUTTS.

One rubbing-stone.

MR. ARTHUR LOVE.

One flint arrow.

MR. M. TOVEY.

One large slate (woman's) knife.

MR. JOHN E. GLOVER.

One chisel-gouge.

MR. JOHN MCGUIRE.

Two celts or hatchets.

MR. JOHN ATCHESON.

One semi-circular slate (woman's) knife.

MR. HUGH ROBERTSON.

Two double-ended celts, or hatchets.

MR. PETER STEWART.

One small gouge.
One large gouge.
Two slate knives.
Several arrow points.
Four celts or hatchets.
One rubbing-stone.
One mealing stone—very good.

MR. WM. ROTHWELL.

One gouge.

MR. DANIEL McEWEN.

Two celts or hatchets.

MR. ROBERT McEWEN.

One copper spear.

MR. GILBERT BEEMAN, NEWBURGH.

One small celt, from Napanee River.
One very large and fine celt.

MR. LEO JARBEAU.

One very small arrow-point.

MR. T. B. CALDWELL.

One clay pipe.
One clay pipe-stem.
Several fragments of pottery.

MR. S. STEVENSON.

One flint arrow-head from Falls of Montmorenci, Quebec.

MR. JOHN McEWEN.

One celt or hatchet.
One exceedingly fine red, slate gouge.

MR. THOS. HALEY.

One red, slate gouge.

MR. SAMUEL WILSON.

One soapstone pipe.

MR. A. B. BUDD.

One large, slate gouge from Calabogie Lake.

MR. J. C. McLEAN.

One sandstone gouge.

MR. E. PLAYFAIR.

One arrow-head of peculiar form.

MR. JOHN RICHARDS.

One celt or hatchet.

MR. EDWARD CAVANAGH.

One perfect flint arrow-head.

One flint knife.

MR. HUGH NICHOL, STRATFORD.

Seven unfinished slate tablets.

One roughly flaked tool.

One water-worn pebble partly pecked into shape.

DR. CHAS. B. TWEEDALE (formerly of St. Thomas, Elgin County).

One small mealing stone, well-hollowed, Elgin county.

One rough stone celt, nine inches long, rubbed smooth at the sharp end, Tennessee.

One grooved axe, nine inches long, Elgin County.

One grooved axe, six inches long, Elgin county.

One grooved axe, six inches long, Elgin County.

One adze, six inches long, two inches wide, showing deeply worn binding marks, Elgin County.

One double-ended celt, of fine black stone, highly finished, Elgin County.

One good gouge, five inches long, two and a half inches wide, Elgin County.

One gouge, slightly imperfect.

One good, grey granite celt or hatchet.

One large, plain celt, seven inches long and three inches wide, Elgin County.

Three clay pipes, perfect, Elgin County.

One heavy, plain clay pipe, Elgin County.

One small, square clay pipe of unusual pattern, perfect, Elgin County.

One three-sided, stone pipe, with engraving of a turtle, perfect, Elgin County.

One clay pipe with flaring bowl, Elgin County.

One pipe-stem, four inches long, ornamented, Elgin County.

One stone pipe, rare form, perfect, Elgin County.

One stone pipe, very fine bird form, perfect, Elgin County.

One stone tube, five inches in length.

One banner-stone, perfect, Elgin County.

One bead, mottled, blue, three and a half inches long, Elgin County.

One bird amulet, four inches long, Elgin County.

Four sinkers, Lake Erie shore, Elgin County.

One highly polished celt, seven inches long, Elgin County.

Ten plain celts, various sizes, Elgin County.

One catlinite pipe of recent manufacture, N. W. Territory.

One clay pipe head, stem broken, Elgin County.

One brown chert implement, seven inches long, and very finely made, Kentucky.

One quartz spear head. fine, Kent County.

One small slate pendant, perfect, Elgin County.

One fine chert spear, four and a half inches long, Elgin County.

Two fine chert knives, perfect, Elgin County.

Seventy-five spear and arrow heads, many of unusual forms, Elgin County.

Three spear heads, about four inches long, perfect, Elgin County.

One slate gorget, with four holes, Elgin County.

One sandstone gorget, hole partly drilled, Elgin County.

One large bone awl, with hole bored in the head, Elgin County.

Six small bone awles or needles, Elgin County.

One gouge, ten inches long, with deep groove, Elgin County.

One stone chisel of graceful form, one end broken, fifteen inches long, Elgin County.

One unfinished stone pipe, Elgin County.

One limestone pipe, blackened, Elgin County.

One catlinite pipe, old form, Minnesota.

One bird-shaped stone pipe, well carved, Southwold township.

Thirteen clay pipes, mostly imperfect,	Elgin County.
Two stone pipes,	"
One stone pipe on which a turtle is engraved,	"
Nine tablets or gorgets of slate,	"
Two pendants or ear-drops, slate,	"
One ceremonial stone (butterfly form),	"
One ceremonial stone (double pointed),	"
One ceremonial stone (horn-like),	"
One bird amulet, very flat,	"
Two slate tubes,	"
Three rough "sinkers,"	"
Three unfinished slate specimens,	"
One chisel-like stone, well made, fifteen inches long,	"
One small mealing-stone,	"
Five plain bone needles,	"
One bone needle with suspension hole at large end,	"
One blunt bone tool,	"
Four large fragments of pottery,	"
Twenty rudely formed flints,	"
Twenty-two flints with wedge-shaped butts,	"

Three leaf-shaped flints,	Elgin County.
Three slightly necked flints,	"
Twelve flint scrapers,	"
Sixty flints, all fine, from one inch to five inches long,	"
Three drills,	"
Thirty-two stone axes and adzes, plain,	"
Three grooved axes,	"
Four miscellaneous,	"

Prof. G. S. Ramsay, Albuquerque, New Mexico.

One Pueblo clay bowl, eighteen inches in diameter, from Isleta, N. M

Four Pueblo clay bowls from Jemez, N. M.

One Pueblo clay bowl from San Dominica, N. M.

One Pueblo clay pitcher from Cochita, N. M.

One Pueblo clay bowl from Isleta, N. M.

Two Pueblo clay drinking cups, Cochita, N. M.

Two Pueblo clay drinking cups.

Five Pueblo clay bird-forms,

One rude bird-form in stone, New Mexico.

Four shallow clay vessels, Pueblo, N. M.

Five imitations (perhaps *fac similes*) of ancient pottery.

One Indian drum, Pueblo, N. M.

One Madonna of wood and cloth, from old church in Pesos, N. M.

One painting of a saint from the old church of Acoma, N. M.

One small cross ornamented with straw pattern from church of San Miguel, N. M.

One piece of obsidian, N. M.

Mr. C. H. Laidlaw, Hillsboro,' New Mexico.—(*Exchange*).

Two Pueblo clay bowls.

Mr. J. S. Cairnduff, Harvey Township, Peterborough County.

One clay bowl, almost perfect, from Harvey township.

Numerous fragments of pottery showing patterns.

One small human head, clay.

One limestone tool, apparently in process of being made into a gouge.

Nine imperfect stone hatchets, or axes.

One part of large bone awl marked with lines either for ornament or as a record.

Seven fragmentary clay pipes.

Six miscellaneous bone specimens.

One large and very good mealing stone of gneissoid material, and deeply hollowed on upper and lower sides.

Mr. J. M. Irwin, Peterborough.

One large, and fairly perfect clay vessel from north shore of Clear Lake.

Prof. Carerra, Los Cruces, New Mexico.—(*Exchange.*)

One metate, mealing-stone or mortar.

One red, gneiss axe, peculiarly grooved. Has latterly been used as a pounder, or hammer.

N. W. University, Chicago.—(*Exchange*).

One mortar, mealing stone, or stone bowl, from Missouri.
One grooved axe, Illinois.
One small, grooved axe, Indiana.
One very fine, grooved hammer, South Dakota.

United States National Museum, Washington.—(*Exchange.*)

One metate, Pueblo, Arizona.
One mortar, California.
One small stone bowl, California.
One stone baking plate, California.
Two fragments of serpentine bowls, California.
Three fragments of steatite bowls, California.
One rude steatite vessel, Rose Hill, District of Columbia.
One slab with mortar-like cavity, Maryland.
Four pestles from California.
One pestle, Oregon.
Two pestles, Pennsylvania.
One pestle, Connecticut.
One pestle, Georgia.
One pestle, Tennessee.
One hammer-stone, Kentucky.
One " Pennsylvania.
One " Tennessee.
One " Ohio.
One " Georgia.
One grooved axe, Kentucky.
One " Connecticut.
One " Georgia.
One " Ohio.
One " Illinois.
One " North Carolina
One " Pennsylvania.

One grooved axe, Indiana.
One polished hatchet, North Carolina.
One polished hatchet, Ohio.
One polished hatchet, Georgia.
One polished hatchet, Connecticut.
Three polished hatchets, Tennessee.
Thirty-seven rude quartzite implements, surface finds, District of Columbia.
Fifty arrow heads, Atlantic coast.
Fifty arrow heads, Ohio and Mississippi valleys.

MR. T. W. ROBINSON.

One small stone bowl, or pot, with three feet, and two perforated lugs.
One very fine discoidal stone, Lee County, Virginia.
One steatite pendant, grooved and bored, Lee County, Virginia.
Twelve small arrow heads, Lee County, Virginia.
Twelve scrapers, Lee County, Virginia.
One large sandstone pipe, Duffield, West Virginia.

MR. MORRILL HARPER, GUILFORD, INDIANA.

One very good spear-head.
Three flints of usual type.

MR. F. CADDY, TORONTO.

One fine, bar amulet, imperfect; Healy's Falls.

MR. JOHN BAY, (WAHSATCH).

One Modern Indian workman's knife.

MR. W. MACNAMARA.

One large, roughly quadrangular flint; Etobicoke.

MRS. J. W. ANNIS. (Collection made by the late Rev. J. W. Annis, M.A., chiefly in the "Huron Country" Simcoe County.)

Four slate tablets.
Five slate tablets, imperfect.
One slate tablet, partly made.
One clay pipe-bowl of very unusual form.
Four square mouthed pipe-bowls.
One owl head pipe-bowl.
One fox (?) head pipe-bowl.
Seven clay pipes of various patterns, more or less imperfect.
One white stone pipe.

One stone tube-pipe.
One piece of slightly carved soapstone.
One half of a long, curved " ceremonial " stone.
Twenty-five scrapers of chert.
Twelve rude flints.
Eighty flints of various forms and sizes.
Seven small rubbing stones.
Twenty stone adzes.
Twelve stone axes.
Three stone chisels.
Five unio shells that have been used as scrapers.
One small earthenware vessel, apparently moulded on the end of a finger.
Fifty fragments of pottery bearing patterns.
One stone disk, one and-a-half inches in diameter, perforated.
Two stone disks, one three-quarters of an inch, and one an inch in diameter, each marked with a cross.
Eleven hammer stones.
Twenty bone awls, mostly imperfect.
One bone pendant.
Three bone pins, two inches long, rounded at the ends.
Ten bone beads.
Nine miscellaneous bone and horn specimens.
Three femors.
One lower jaw; human.
Some charred Indian corn.
Seventeen iron and copper specimens of European manufacture.

DR. M. I. BEEMAN, NEWBURGH.

One small soapstone pipe—imperfect, found on shore of River St. Lawrence, near Brockville.

MR. ALEX. PARKS.

One grooved stone hammer, Renfrew County.
Eleven plain celts or hatchets. " "
Three gouges. " "
One semi-circular, woman's knife. " "
Two slate tablets, unfinished. " "
Three small arrow-heads. " "
One soapstone pipe, Lanark County.

MISS ELIZABETH PEACE THOMPSON, CANNINGTON.

One large, thin, and very fine gorget—two holes.

MR. FRANK WINTEMBERG, WASHINGTON, ONT.

One gorget or tablet of slate—two holes.
One imperfect cubical stone of unknown use. See figure 63.

MR. WM. MATHESON:—From Middlesex and Perth Counties.

Eight gouges.
Ten grooved axes.
Two hundred and sixty plain axes.
Twelve imperfect pestles (?)
Two grooved hammers.
Twenty-six hammer stones
Three iron pipe-tomahawks.
Thirteen plain iron tomahawks.
Forty gorgets or tablets of slate, (perfect).
Ten gorgets or tablets of slate, (imperfect).
Three stone pipes.
Four clay pipes, (imperfect).
Three ceremonial stones (butterfly form).
Four ceremonial stones (double pointed).
Three bird amulets.
Five stone tubes from two to six inches long.
One slate ornament of unusual form, pendant?
One flint, eight and a half inches long.
Thirteen flints from four to six inches long.
Four hundred and eleven common flints.
Fifty-two miscellaneous.
Two pieces of native copper, found as drift, in West Williams township.
One head-dress of beads and feathers.
One head-dress of hide and horns.
One North-west catlinite pipe and pipe-stem.
One modern war-club of wood.
One turtle rattle.
One small tom-tom or drum.
Twelve British Columbia arrowheads.

FROM SMALL OSSUARY ON FARM OF MR. ARCHIBALD BOWMAN, TOWNSHIP OF FLOS, SIMCOE COUNTY.

Eight skulls—four with lower jaw, and otherwise nearly perfect.
Numerous limb bones.
One small French copper kettle.
One fragment of copper kettle with portion of deer-skin in which the kettle had been wrapped.

Twenty-eight quadrangular shell beads averaging about an inch in length, and ¾ of an inch in width, of the rare variety known as "runtee"—bored lengthwise.

Six French, iron tomahawks.

One clay pipe.

One good fragment of pottery—all that was in the ossuary.

FROM AN OSSUARY ON MR. SYERS' FARM IN MANVERS TOWNSHIP, DURHAM COUNTY.

Fifty-seven skulls in good state of preservation, numerous limb and other bones.

BY PURCHASE.

One North-west leather jacket, richly ornamented with beads.

One pair leather trousers, richly beaded.

One pair finely beaded moccasins.

MR. GEO. C. PEACOCK.

One small chert drill—Malahide township, Elgin County.

One peculiarly flattened, clay pipe. " "

MR. R. D. GEORGE.

One imperfect clay pipe—snake pattern, Markham township, York County.

REV. A. G. MORICE, O. M. I., BRITISH COLUMBIA.

Two ceremonial or dance wigs used by the Dènè Indians, near Stuart's Lake, British Columbia.

MR. W. J. DUNLOP.

One set of ivory bolas (5 pieces) from Alaska—used to catch birds on the wing.

COLONEL JOHN W. HALL, U. S. ARMY.

One lariat of horse-hair, used on the western plains.

MR. B. F. SHARPE, N. DORCHESTER TOWNSHIP, MIDDLESEX.

One clay pipe bowl.

One banner stone (butterfly) form.

One tablet or gorget—two holes.

One fine small arrow-head.

MR. WM. SADLER, N. DORCHESTER TOWNSHIP.

One large, curved, leaf-shaped flint.
One red, slate gorget—one hole.
One chert drill.

MR. W. JULL.

Seven fine arrow-heads.
One steel spear-head.

MR. ROBERT MARTIN, SCARBOROUGH, YORK COUNTY.

Four fine flints.
One " woman's knife," chipped and ready for being polished.
Two good stone axes.
Two fragments of pottery.
One small soapstone pipe.
One circular, deeply pitted, and well formed hammer-stone.

MR. GARNET PAGE, BERTIE TOWNSHIP, WELLAND COUNTY.

One clay pipe, very small and well made.

MR. PHILIP SMITH, HUMBERSTONE, WELLAND COUNTY.

One stone pipe, dark red.

MRS. JOHN TROUP, HUMBERSTONE TOWNSHIP, WELLAND COUNTY.

One stone gouge.
One slate, tube amulet, with side groove.

MR. CYRENIUS BEARSS, HUMBERSTONE TOWNSHIP, WELLAND COUNTY.

Two stones adzes, with chamfered backs.
One large flint.
One small mealing-stone, (?) one side of this specimen is quite smooth, while the other side is rough as if it had been used as a chipping-block, or stithy.
One globular hammer-stone.
One flat and quadrangular hammer-stone.
One finely worked stone in course of preparation for some tool.

PROF. J. A. CLARK, WINCHESTER, TENNESSEE—(*Exchange.*)

One clay pipe.
One skull.
Fifty arrow-heads.

MR. MCKENNY.

One clay pipe, from Christian Island, Georgian Bay.

DR. T. W. BEEMAN, PERTH, LANARK COUNTY.

One copper spear-head.

One copper tool or ornament of unknown use.

DR. DOUGLAS, ROMEO, MICH.

One tablet or gorget.

MR. HORATIO N. RUST, S. PASADENA, CALIFORNIA.—(*Exchange.*)

One mealing-stone or metate, California.

One small grooved axe, Madisonville, Ohio.

Thirty-five good arrow-heads—quartz, chert and red jasper, Ohio.

One flint axe, Tennessee.

Two large spear-heads of chert, Tennessee.

One model of Klamath River, Indian canoe, North California.

DR. FREEMAN, CHICAGO.—(*Exchange.*)

One stone pipe—old type—Ohio.

One stone pipe—tube form—Ohio.

One stone pipe, unfinished, of quartzite, Ohio.

One stone pipe, unfinished, platform pattern, Ohio.

One stone pipe, unfinished, tube pattern, Ohio.

Two semi-ovate grooved stones of unknown use, corresponding in size and form to specimens from Indiana.

Two semi-spherical well finished stones of unknown use.

Ten discoidal stones, two from an inch to two and a half inches in diameter Clark county, Ohio.

Two large naturally rounded stones, slightly pitted in the centre of each side, Illinois.

Five good pestles—some much worn, from Ohio.

Fourteen grooved axes from Indiana and Kentucky.

MRS. CARPENTER, CHICAGO.—(*Exchange.*)

One very fine stone pipe, from Wisconsin.

PROF. GREEN, INDIANAPOLIS.

Two imperfect bone gorgets of unusual form, from mounds in Clarksville, Ohio.

One bone tube, Clarksville, Ohio.

One unfinished stone pipe, Ohio.

One stone (part of pipe-stem) partly bored by means of a reed or other tube, showing the core), Ohio.

MR. T. B. STEWART, LOCKHAVEN, PENN.

One small, stone stithy, or chipping-block, Pennsylvania.

MR. WM. NIVEN, NEW YORK, (AZTEC RELICS, MEXICO.)

Two hundred and thirty small terra cotta specimens, consisting mainly of human heads—others represent heads of various lower animals, including mammals, snakes and birds.

Twenty-five statuettes from two to six inches high.

Two statuettes twelve inches high.

One richly ornamented pitcher, with elegant handle. On this vessel are modelled three human faces—one in front has a dark mineral inlaid to form the eye orbits.

One tripod plate (red clay.)

Thirty-three pottery vessels of various forms and sizes, from one inch to ten in diameter, and mostly bearing patterns worked in black. In two, the lines forming the pattern are depressed; in one, the design is in white; a few are quite plain.

Nine clay specimens, each having two holes. The use of these is uncertain, and I have been unable to see any reference to such in any book I have examined.

Two terra-cotta whistles, apparently in form of conventionalized human skulls.

Three terra-cotta seals or stamps, bearing richly worked patterns in high relief.

Twenty-two spindle whorls, in terra cotta.

Fifteen circular clay counters (?)

Two sinkers (?), terra-cotta.

One clay ring.

One large clay pipe (dubious as to its antiquity).

One jade pendant.

Three jade beads.

One jade amulet.

One jade triangular pendant.

One jadeite idol or charm.

Three jadeite beads.

Seventeen rude beads or counters.

One small black stone mask.

One alabaster ornament.

One chisel of chalcedony.

One axe of trachyte.

One small rubbing stone.
Forty small shell beads.
Three large shell beads.
One labret of obsidian.
Thirty arrows of obsidian.
Fourteen whole and fragmentary obsidian knives.
Three obsidian cores.
One obsidian circular ornament.
Seven stone idols from ten inches to twenty-six inches high.
One large stone vessel, hollowed at both ends, (hour-glass form.)
One tripod stone bowl.
One stone vessel with human figure carved on one side.
One stone head of mountain goat.
One large stone frog.
One large stone snake (coiled).
One large human mask.
One small human mask.
Several miscellaneous specimens.

MR. ALLAN CASSELLS.

Three specimen of modern Mexican pottery.

MR. WEIRS, CHICAGO.—(*Exchange.*)

One stone from Missouri, bearing three pits about an inch in diameter.

Sixteen beautiful specimens of Pueblo pottery, the largest being fourteen inches in diameter, and of graceful form. Four are bowls, ten inches in diameter. Three are animal forms. One is a narrow-necked *olla* or water-jug on which are modelled three bird-forms about two inches high. Three are deep bowls from four to five-and-a-half inches in diameter. All these are of light colored ground, and are ornamented with designs in red and black.

One spherical red clay rattle, four inches in diameter, with black pattern.

Three black, Zuni, basket-handled vessels.

Eleven small modern specimens of New Mexico, Indian pottery.

One cliff-dwellers' clay vessel.

MR. CLARENCE B. MOORE, PHILADELPHIA, PA.—(*Exchange.*)

One celt coated with iron oxid, from Mandarin Point, Florida.
One celt of shell (*Strombus gigas*), Putnam Co., Florida.
One digging-tool made from shell of *Fulgur carica*, Volusia, Florida.
Five arrow-heads, Florida.

MR. HERBERT JOHNSTON, PEFFERLAW, YORK COUNTY.

One olivella (sp ?)—part of a number found together, and ground at the end to admit a thread.

DR. S. H. COLLINS, LAWRENCEBURG, INDIANA.

Eight pestles from Warren Co., Indiana, and Hamilton Co., Ohio.

Twenty-nine plain celts or axes from Warren Co., Indiana, Hamilton Co., Ohio, and Boone Co., Kentucky.

Four small, plain, specimens of hatchet form, possibly for insertion in wooden club heads.

Six grooved axes from neighboring counties in Ohio, Indiana and Kentucky

One small hammer-stone, Boone Co., Ky.

One broken banner-stone, Warren Co., Ind.

Two small paint cups (?), Miller Co., Ind.

Fifty-three rough or " reject " flints.

One hundred and one barbed and semi-barbed flints.

Ten long and neckless flints.

Sixteen flints with round-based necks.

Fifty-four flints of various patterns, and all perfect in form.

Fifty-nine triangular flints—mostly small.

Three flints, chipped from one side—of the type known as "rotary."

Eight imperfect flints.

Eight serrated flints.

Eight drills.

(The " flints " vary in size from an inch to five inches in length, and many of them are absolutely perfect. They are of quartzite, chert, flint, chalcedony, and red and yellow jasper.)

Three good fragments of pottery, Warren Co., Ind.

One beautiful bowl of black pottery-ware, ornamented with incised lines made by an Indian woman in Arizona—said to have been the last woman in the tribe who understood the ancient art of making pottery.

One tear-vase from Rome, Italy.

MR. C. J. B. RAJEN, LAWRENCEBURG, INDIANA.

One grooved stone axe, Dearborn Co., Ind.

MRS. J. S. CULVER, SPRINGFIELD, ILL.—(*Exchange.*)

One large leaf-shaped flint, Jerseyville, Ill.

One fine, long-necked spear head, Jerseyville, Ill.

REV. MR. WESTERVELT, CHICAGO.—(*Exchange*).

Two very small arrow heads, Colorado.

DR. A. P. COLEMAN, TORONTO.—(*Exchange.*)

Two obsidian tools, Napa County, California.

MR. T. H. POWELL, LONDON, ENG.—(*Exchange.*)

Three flint scrapers, Beechey Head.
One flint celt, Southdowns, near Beechey Head.
One flint celt, Eriswell, near Warren Hill, Suffolk.
Two flint chisels (broken), Beechey Head.
One portion of polished celt, Beechey Head.
One rough flint, North Stoke, Oxfordshire.
Two scrapers, flint, North Stoke, Oxfordshire.
One flint celt, Icklingham, Suffolk.
One celt, originally polished, afterwards broken and re-fashioned, Wold Newton, Yorkshire.
Six Arrow-heads, near Grimm's Dyke, Oxfordshire Hills.
Four flint flakes, Suffolk.

DR. DOUGLAS, GRAND HAVEN, MICH.—(*Exchange.*)

One small, well-formed celt, Lockport, N. Y.

MR. F. W. WAUGH. TORONTO.

Seven adzes and chisels, Tuscarora, Brant County.
One adze, field near Brantford.
One club-blade (?), near Brantford.
One celt of unusual form, Cedar Swamp, near Brantford.
Two chisels or small celts, banks of Grand River, near Brantford.
One large, plain adze, south of Brantford.
Two large, plain axes, Tuscarora, Brant County.
One double-pointed stone tool, Tuscarora, Brant County.
Eleven neckless, or shankless flints, Brant County.
Twelve large flints, Brant County.
Two hundred and fifty flints of various sizes, and from various localities in Brant County.
One well carved bird's head, from a stone pipe bowl, near Brantford.
One flint knife, or scraper, "
One rubbing-stone, "
Two ornaments—ear-drops (?), of unio shell, "
Thirteen land shells (helices), perforated for stringing, "
One piece of conch, slightly engraved, "
Seven pieces of conch, partly worked for beads and pendants, "
One bone tube, or small case, rectangular in cross section, "

Eighteen small bone pins, both ends rounded, near Brantford.
Sixteen bone beads, "
Eleven bones, bearing tallies or record-marks, "
Two engraved bones, "
Four bone awls, "
Three pieces worked deer horn, "
One deer horn arrow-straightener, "
Five hammer-stones, "

One piece of Hudson River shale used as a rubbing-stone, contains five parallel grooves, near Brantford.

One neatly formed animal (fox ?), head from bowl of clay pipe, near Brantford.
Seven clay pipe heads, stems broken, "
Numerous fragments of pottery, "
Two maple sap troughs of birch bark, Manitoulin Island.
Three maple sap buckets, Manitoulin Island.
Two maple sap spiles, Manitoulin Island.
One maple sugar cake mould. "

(Articles like these are used by the Ojibwas on the Manitoulin and north shore reserves at the present day.)

Mr. G. E. Laidlaw, Victoria Road.

One celt or axe, Bexley Township, Victoria County.
One celt, degraded to hammer, Bexley Township, Victoria County.
One mealing-stone of gneiss, Bexley Township. Victoria County.
One small and imperfect disk, Bexley Township, Victoria County.
One piece of graphite, village site, Bexley Township, Victoria County.
One piece of worked chert, "

One copper spike, twelve inches long, Kaministiquia River, Thunder Bay District.

One copper knife, Bolsover, Eldon Township, Victoria County.
Numerous flints, Bexley Township. Victoria County.
One piece of slightly worked micaceous schist, Victoria County.
Eleven bone awls or "needles," Bexley Township, Victoria County.
One tomahawk catlinite pipe, Fort Q'Appelle, N. W. Territory.
Three modern pipes, Manitoba.
One large catlinite pipe (old type), N. W. Territory.
One limestone pipe (modern), repaired with lead, N. W. Territory.
One woman's pipe (Piegan Indian), Fort McLeod, N. W. Territory.
Three very fine vase-formed pipes, Eldon Township, Victoria County.
One unfinished platform pipe (broken), West Bay, Balsam Lake.

One large stem of stone pipe, Balsam Lake, Bexley Township.
One square-mouthed clay pipe, Bexley Township.
Several fragments of pottery from village sites, lots 5 and 6, con. 2 Bexley.

FROM OSSUARY, ON FARM OF MR. SYER, MANVERS TOWNSHIP, DURHAM COUNTY.

Fifty-seven skulls, mostly in good state of preservation.

MR. EDWARD HANNA, JANETVILLE, DURHAM COUNTY.

Two celts or hatchets.

MR. A. B. CLIFFORD, JANETVILLE.

One rudely formed, double ended celt.

MR. HAMPDEN BURNHAM, PETERBOROUGH.

One small and well-made copper, "ghost arrow."

PROFESSOR CARERRA, LOS CRUCES, NEW MEXICO.—(*Exchange.*)

One very valuable and peculiarly grooved stone axe, of red gneiss, White Oak Mountains, New Mexico.
One large and fine mealing-stone, New Mexico.

MR. R. HAY, JUNCTION CITY, KANSAS—(*Exchange.*)

Two stone hammers, Geary County, Kansas.
One peculiarly grooved or hollowed rubbing-stone, Geary County, Kansas.
Nine flints from mouth of Chisholm Creek, Kansas.

MR. A. STEVENSON, B. A., ARTHUR.

One piece of catlinite in crude form, from Pipestone quarry, Minnesota.
(This is the material from which the famous red pipes were made).

MR. W. S. SHERWOOD, TORONTO.

One oil painting of Ojibwa Indian woman (daughter of Big Canoe, Snake Island), from sketch made at Big Canoe's house, 1883.

MR. T. MOWER MARTIN, TORONTO.

One photograph of Indians breaking up camp.
One oil painting—Indian life.

DR. T. W. BEEMAN, PERTH.

One water-color sketch of scaffold burial.

MR. G. M. PULLMAN, CHICAGO.

One photograph of Pullman bronze group to commemorate the Indian massacre of 1812, in Chicago.

MR. W. J. MOULE, TORONTO.

Four large pen and ink sketches of distinguished Indians—Pocahontas, Joseph Brant, Pah-te-la-sha-ro, and an Ojibwa Chief.

MR. A. C. GOODE, TORONTO.

Painting—Indian life.

(A number of other artists have promised to contribute pictures characteristic of Indians, and Indian life. Pictures of this description are sometimes of greater value than specimens.)

MR. O. A. HOWLAND, M. P. P.

One old Spanish painting of the Madonna, from the ruins of a church in New Mexico.

One old image composed of wood and cloth heavily coated with paint, from New Mexico.

MR. HENRY SMITH, NEW HAMBURG.

Two casts of bird amulets, Blandford township.

One cast of bar amulet, Blandford township.

One gorget peculiarly ornamented with holes arranged in rows of threes.

DR. G. S. SCHWALBE, STRASBURG, GERMANY—(*Exchange.*)

Six European crania—recent.

Six Egyptian crania from mummy-tombs in Thebes.

MR. R. SHAW, WOOD.

One perfect skull showing several peculiarities.

PRIMITIVE INDUSTRIES AND WORKING METHODS.

To study the method by means of which any object of aboriginal manufacture has been produced is second only in importance to ascertaining the *purpose* of the object—indeed, it may be that an examination of working methods in one case will sometimes supply hints as to the application of certain other articles, whose use has been doubtful. Mechanical and industrial development necessarily accompanies ethical evolution (is, in fact, a constituent of it), notwithstanding some apparent exceptions that may be cited. Experience tends towards improved operative methods, and advancement in taste demands superior quality of workmanship. Even in the stone age numerous mechanical arts were successfully practiced. Of course, this could be done only in a very simple or primitive way, and yet, here and there, all over the world, we find the prototypes of many arts and industries in vogue at the present day. Our modern hammers, axes, chisels, knives, gimlets, drills, files, saws, and even turning-lathes may be traced to one and another early devices in stone, and as each primitive implement and ornament was produced by means of other forms in stone, it becomes interesting as well as instructive to follow the methods of workmanship employed by the primitive artisans.

It would be impossible to name with assurance the first kind of mechanical art performed by man in his lowest condition, but it is quite safe to place that of hammering as among his earliest attempts to secure animal food, or, having secured it, to break it up. If we concede priority to the use of stones as missiles, the effect of a successful throw may well have suggested immediate action in employing the stone to pound or hammer. However this may be, one of the most interesting of archæological finds is that of the hammer-stone. Destitute of beauty in outline or texture, it was nevertheless well adapted for the purpose in view. A little experience would suffice to teach that all stones were not of one quality, and to enable the ancient hunter or workman, feeble as his intellect probably was, to select the hardest, most durable material, and we find accordingly that with few exceptions even the rudest hammer-stones are of silicious quality. Many of them appear to have been chosen on account of some point, or angle, or edge on the surface that enabled the worker to concentrate his blow, when using the stone as a tool.

Stones of this description bear the very clearest evidence of their application, for the portions referred to are roughened by repeated blows on the material the stones were employed to break, or by means of coming in contact with the stithy-stone supporting the article to be broken. Here, too, comes in the suggestion that the stithy-stone or block—specimens of which are not uncommon—must also have been an early device, slightly subsequent to that of the hammer, supplying an unyielding bed for effective strokes on bones, nuts, shells, wood, and even on animal tissue. With advanced skill in the use of tools, less refractory material was sometimes taken for hammers, and considerable labor was expended in reducing it to a regular shape—generally disk-like, and with a shallow pit on each side enabling the worker to grasp the implement more firmly. Nor unfrequently round or ovate, lenticular, water-worn stones were selected and with or without the finger-pits were used as hammers, if we may judge from the battered appearance presented by their edges. Stones of this kind appear also to have been employed as stithies, one or both sides of them bearing deep, elongated markings as if the result of heavy blows from a sharp tool passing beyond the object in process of being worked upon them. It is reasonable to suppose that silicious chips of various kinds were sometimes held in one hand as chisels while hammer strokes were applied to them from the other, but, as might be expected, there is no direct evidence to this effect. The cleft or cut-like marks in the stithy-blocks may be accounted for by the employment of such tools.

The hammers referred to were all haftless, and for light work such as blocking-out "flints," or breaking bones and nuts, the want of a handle would not be felt. It was only when comparatively settled modes of life were adopted, demanding heavier tools and correspondingly ponderous blows to drive stakes in the construction of shelters and defences, to use on wedges in splitting wood, and to carry on rude methods of mining to procure chert, soapstone, slate and copper, that the application of a handle suggested itself. In America this was effected by means of laboriously cutting a groove round the stone-head sometimes almost midway, and sometimes about two-thirds of the distance from the face, to afford a "seat" for a strip of rawhide by which handle and head were firmly bound together. Perhaps withes were sometimes substituted for handles bound in this way.

But it was in the production of more delicate tools, ornaments, pipes and "ceremonial" objects that most ingenuity was displayed. Even the most skilfully directed blow on a choice piece of rough stone, or on a partly finished article might ruin it for its purpose. It therefore became necessary to adopt more cautious, more painstaking devices. Persistent pecking with sharp stones was a common method of reducing the rough block to the desired form, when flaking was impossible, and many excellent examples of this kind only partly executed may be seen in the museum, but even pecking was sometimes dangerous so far as fracture was concerned, and other methods were employed to bring the stone into shape, or to separate one piece from another. One of these methods was sawing. To reduce the size of a piece of stone in process of being wrought, cuts were made within a short distance of each other by the aid of flint-flakes, and, possibly, water, after which the intervening portions of material were readily broken off, and then followed the rubbing-down process with, or on other stones of good abrasive quality.

By the sawing method also, pieces of considerable size were separated from one another, the cut being made of sufficient depth all round the stone to ensure the direction of the fracture when the smaller portion was struck or wrenched off.

Still another plan was to bore a row of holes along the desired line of fracture, next to saw deeply the parts between the holes on both sides, and after separation was effected to remove the elevated portions by rubbing. Several specimens of such work may be seen in the museum.

The boring of stones by savage man has often proved the occasion of much wonder. When the holes are large, say from one-fourth of an inch to an inch or upwards in diameter, one is not at much loss to understand how the operation was performed, but when they scarcely exceed one-eighth of an inch in diameter —sometimes even less—and penetrate stones to the extent of from half an inch to three inches, the method is not clearly seen.

There can hardly be a doubt that the usefulness of water as an aid in perforation, as well as in rubbing, was well understood by the ancient workman. This is one of the things that accident would inevitably suggest, and although it might be difficult to adduce proof to this effcet, it may be taken for granted that in most of the work performed by attrition, water was employed as an agent. In the making of large holes flint drills (to which motion was given by means of a bow) were employed. It is known that the use of the drill-bow was common among the Huron-Iroquois. It is likely also that holes were occasionally made with drills of wood assisted by sand and water, if we may judge from the appearance of some unfinished work, as there is an absence of the striation that characterizes perforations made with flaked tools. If not in Ontario, at least further south, holes were sometimes bored by means of a tubular drill. A specimen in our possession—probably part of a "platform" pipe-stem—has the beginning of a hole made with a tool of this kind, as is evident from the core. Such a drill may have been made by removing the pith from part of an elder, or other similar growth. But, as already remarked, the perforation of small holes, sometimes to the depth of several inches, is more difficult to understand, and is only one of several processes regarding which we are ignorant.

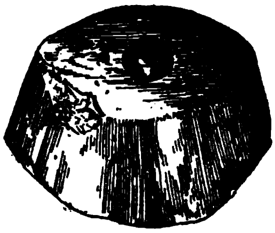


Fig. 1. (Full size.)

It is highly probable that most of the tools and other articles of stone, as well as of wood and bone, were made by the men—weapons, more especially, the users would prefer to shape for themselves, or have produced for them by other men possessing peculiar skill in the art, but a large amount of labor devolving on the women, it is to them that we must look in our search for primitive methods. It has been well said that "the militant side of primitive culture belongs to the man; the industrial belongs to woman,"* and the same writer proceeds "The characteristic implement of woman is not a weapon, but that knife called by the Eskimo the 'ulu,' or woman's knife, which is used primitively for all manner of industrial purposes, and which still survives among European women as the kitchen chopping knife. The man undergoes the fatigue of hunting and when he throws the game at a woman's feet his work is done; it is her part to cook it, as well as to make the vessels in which the food is placed. The skins and refuse are hers to utilize, and all the industries connected with clothing are chiefly in her hands. * * * Women are everywhere the primitive agriculturists, though the rougher and heavier work of making a clearing has usually fallen to the men, and women hold their own in the fields, even in the highly civilized Europe of to-day; thus, in Italy among eleven million women, over nine years of age, more than three millions are employed in agriculture. Women have everywhere been the first potters; even in Europe, almost up to the present day, girls in Jutland were brought up to make pots. Becoming the first potters, women prepared the way for decorative art, but never went beyond its first rudiments; ornamentation, apart from use, seems usually to be peculiar to men.

Women are sometimes the primitive doctors; but this is by no means universal, probably because medicine-craft at an early period is not differentiated from priest-craft, which is always chiefly in the hands of men; their more stimulating life of alternate fasts and orgies amid wanderings far afield during the hazards of a chase or of war, makes them more acquainted with the morbid mental phenomena, and with the more 'supernatural' aspects of nature."

Mr. Ellis then quotes from Prof. O. T. Mason, in the *American Antiquarian* for January, 1889. Prof. Mason writes, "Let us follow the savage woman through her daily cares in order that we may comprehend the significance of her part in the play. The slain deer lying before her cave, or brush-shelter, or wigwam, shall be the point of departure in the inquiry. She strikes off a sharp flake of flint for a knife. By that art she becomes the first cutler, the real founder of Sheffield. With this knife she carefully removes the skin, little dreaming that she is thereby making herself the patron saint of all subsequent butchers. She rolls up the hide, then dresses it with brains, smokes it, curries it, breaks it with implements of stone and bone, with much toil and sweat, until she makes her reputation as the first currier and tanner. With fingers weary and worn, with needle of bone and thread of sinew, and scissors of flint, she cuts and makes the clothing for her lord and her family; no sign is over her door, but within dwells the first tailor and dressmaker. From leather especially prepared, she cuts and makes moccasins for her husband. Out of little scraps of fur and feathers, supplemented with bits of colored shell, or stone, or seeds, she dresses dolls for her children, makes head-dresses and toggery for the coming dance, adorns the walls of her squalid dwelling, creating at a single pass a dozen modern industries—at once, a toy-maker, milliner, modiste, hatter, upholsterer, and wall-decker. * * * She was at first, and is now, the universal cook, preserving food from decomposition and doubling the longevity of man. Of the bones at last she fabricates her needles and charms. * * * From the grasses around her cabin she constructs the floor-mat, the mattrass, the screen, the wallet, the sail. She is the mother of all spinners, weavers, upholsterers, sail-makers. Counting and varying stitches, and adding bits of black, blue, red and yellow on her textures, she becomes the first decorative artist; she invents the chevrons, herring-bones, frets and scrolls of all future art. To the fields she goes with this basket or wallet strapped across her forehead. By the sweat of her face she earns her bread, and becomes the first pack animal that ever bent under a burden in the world. * * * Home she comes with her load of acorns, roots, seeds, etc., and proceeds to crush them in a mortar or to roll them on a stone slab. Here she appears clearly as the primitive miller. Or, perchance, she lays her seeds in a flat tray, and by help of the wind, or of a hot stone, removes the chaff. Here begins her first lesson in threshing. * * * Perhaps with a stick hardened and pointed in the fire, she digs the roots from the earth, or cleans or tears away troublesome weeds from useful plants, or digs a hole and drops the seeds of pumpkins, gourds, or maize therein. While we watch her working we are looking at the first gardener, farmer, and nurseryman. It may be that on some lonely plain or alluvial river-bank, there is no cave to shelter her and her babes. How long will it take this afore-time basket-maker and leather-worker to devise a shelter of grass or skin and become the architect primeval? * * * The primeval woman was not a potter. It was not until near the polished stone age that she became the pristine plastic artist. This is true, however, that every form, decoration, and function of pottery were invented by woman. * * * In the struggle for existence and exaltation which takes place among many occupations, as among individuals and species, militancy no longer demands all man's waking movements. The arts devised by woman are in the ascendency, and the man militant has glorified them by his co-operation. Her very ancient digging-stick is now a plough; her rude carrying-strap over her aching forehead is now the railroad train; her woman's boat, the ocean steamer; her stone hand-mill, the costly roller-mill; her simple scraper for softening hides, the great tanneries and shoe factories; her distaff and weft-stick, the power-loom; her clay and smooth pebble, the potter's wheel; sharpened-stick and bundle of hairs are all the apparatus of the plastic and her pictorial arts. * * * In the early history of art, language, social life, and religion were the industrial, elaborative, conservative half of society. All the peaceful arts of to-day were once woman's peculiar province. Along the lines of industrialism she was the pioneer, inventor, author, originator."

---

* Man and Woman, by Havelock Ellis. Introduction, p. 5, 1894.

A still more recent writer referring generally to the importance of primitive working methods as a subject for study, says, "Primitive methods of manipulating raw material and of handling tools must ever prove attractive to the student of ethnology. In these we observe the dawn of ideas which, after the lapse of many centuries, have, by degrees almost imperceptible, developed through the minds of superior families of the human race, into those almost miraculously automatic devices that are the crowning mechanical glory of the ninteenth century. The distance is great from the pebble in the hands of the savage, whether used to crack a bone or bring down a bird, to the steam engine of fifty-thousand horse power, and to the gun that can propel hundreds of pounds of metal eight or ten miles, but all the steps may be traced between the simple and the highly complex forms. There is little similarity between the satisfied grunt of an uncivilized man, and the soul-inspiring strains of an oration, but the one is respectively the origin of the other." *

In this connection the attention of archæological students in Ontario is directed to the desirability of preserving not only perfect and highly finished specimens of all kinds, but the very rudest in form as well, and especially those on which the workmanship appears to be incomplete. The former may serve to exemplify the lower types from which the ideally perfect weapon or tool has been evolved, and from the latter much may sometimes be gleaned respecting the devices of the primitive mechanic to reduce his rough material to shape.

ONTARIO EARTHWORKS.

The people who constructed earthworks in this Province never attempted anything of such huge dimensions as are found in many of the States, notably in Ohio, where there are continuous embankments enclosing hundreds of acres. Nor are our embankments comparable to theirs so far as mass is concerned, for, while, as at Fort Ancient, earth-walls rise to heights of from five to fifteen feet, it is seldom that those in this country ever exceed even the former figure. Still, the labors of those who constructed the 'forts' as they are called, in Ontario, are scarcely less interesting--they are certainly not less instructive on this account. Neither did the early inhabitants of our Province exhibit any desire to distinguish themselves, or to commemorate events, by the erection of mounds,† if we except a few in Rainy River District.

Perhaps in the popular name 'fort,' lies the reason for the existence of all the earthworks we find in Ontario. On this assumption one would reasonably enough look for earth-walls enclosing areas large or small, only on commanding situations, but no such invariable choice actuated the aborigines of Ontario either in the extreme east or the extreme west. North of Morrisburg where the line of an old enbankment was traceable only a few years ago, it occupied an almost dead level—in Middlesex and Elgin counties, with one or two exceptions, it is the same, and so it is in the county of Waterloo. There is hardly a doubt that scores of 'forts' lying between the farthest points named have long since been ploughed out of sight, but it is not improbable that a few exist of which we possess no knowledge. Situated anywhere, but especially on a plain, low banks of earth, not exceeding perhaps more than six or seven feet in height, could scarcely in themselves have afforded adequate protection by way of defence, and it is almost

---

* The Catholic Church in the Niagara Peninsula, p. 84, by Dean Harris, Toronto, 1895.

†It would almost appear unnecessary to point out that *a mound is a heap*—an elevation, and yet, by some confusion of ideas, ossuaries, which now-a-days, at all events, manifest themselves as depressions, are referred to in some parts of the country as mounds. In a few places in Simcoe county, even intelligent persons speak of ossuaries as *caves*.

certain that they were constructed as the footholds or foundations of stakes or palisades, as described by Chaplain, Cartier and others.*

In one or two places, traces of the old posts or stakes have been found at intervals along the banks,—as at Beverly, in Wentworth county—but usually there is nothing to show that any palisade existed.

In the neighborhood of where embankments are found, it is a popular belief that at first they were much higher, and that the height is decreasing with the advance of time. There cannot be a doubt that when the earth was originally piled up it stood perhaps two or three feet higher than it does now, but it is not likely that the banks as we find them to-day are any lower than when the enclosures were evacuated by those who formed them. So long as the forest stood the soil was protected from denudation to any serious extent, and the principal diminution in height would be consequent on the subsidence of the material loosely thrown up, or only slightly packed, and after the trees were felled, the grasses and other plants formed a mat capable of protecting the banks from appreciable decrease in height during centuries. A reason for the belief that the banks are gradually becoming lower, may be found in the fact that the observers in many cases were very young when they first set eyes on them, and most of us know, some of us bitterly, how utterly untrustworthy our youthful impressions of magnitude are. But the embankments as they are, bear evidence that they could never have been much higher, for their width of base is scarcely greater than was necessary to hold in position the heaped-up soil, especially if we suppose, as we have good reason to do, that they afforded foothold to two or three rows of palisades crossing each other at the top.

In the construction of these enclosures advantage was taken of any natural declivity that might add to the outward height of the works, if to the extent of no more than two or three feet. Indeed, it would seem that the existence of even so small a hollow was sufficient to govern the choice of location in a section of the country generally level. The proximity of water was in any case a necessity, and if this could be had in the shape of a small stream so much the better, for the supply of fish was not to be overlooked. The selection of ground was also influenced largely by the presence of small fruit and nut-bearing trees, and in this connection it is noteworthy that the nearness of a swamp may be predicated when the site of a fortified encampment is known, as cranberries have always been an important article of food to the Indian.

The first earthwork visited this year is in a field near the Berlin and Waterloo general hospital—a little west of the former town, and south of the latter. I was accompanied by Mr. Jacob Stroh, a most ardent archæological student, who has devoted much of his time during many years to the making of local researches and the forming of a considerable collection of material illustrative of early life in his neighborhood. Although cultivation has to a large extent levelled the banks surrounding this village site, enough remains to show that they formed a large

---

*Most of the villages seen by Arent Van Curler, or Corlear, among the congenors of our Indians in what is now the State of New York, in the year 1634, were situated on elevated ground. In his entry of Dec. 16th, he says, "This castle . . . . is built on a hill, without any palisades or defence," but elsewhere, he mentions that the villages were fortified or protected in this way. On the 22nd of the same month he visited Tenotoge, which he describes as consisting "of fifty-five houses, some one hundred, and other ones more or less paces long," and, he adds, "This castle has been surrounded by three rows of palisades." On the 30th of Dec., he came to a village of sixty-six houses, and "This castle is situated on a very high hill, and was surrounded with two rows of palisades."—*New York Independent.*

He observes that among the village or castle palisades, "six or seven pieces were so thick, that it was quite a wonder that savages could do that," whereas, the "graves were surrounded with palisades that had been split from trees, and they were closed up so nicely that it was a wonder to see." *Ib.*

semi-circle enclosing about four acres, the ends running to a small trout stream flowing through a swamp close by. A portion of the bank still traceable is one hundred feet long, on each side of which there has been a ditch. In an adjoining field not so much ploughing has been done, and there the bank may be followed for a distance of a hundred and thirty-six feet, the height varying from four to six feet—the latter being along the side of a small gully. Here, also there are two banks roughly parallel, the distance between which, from crown to crown, is from seventeen to nineteen feet.

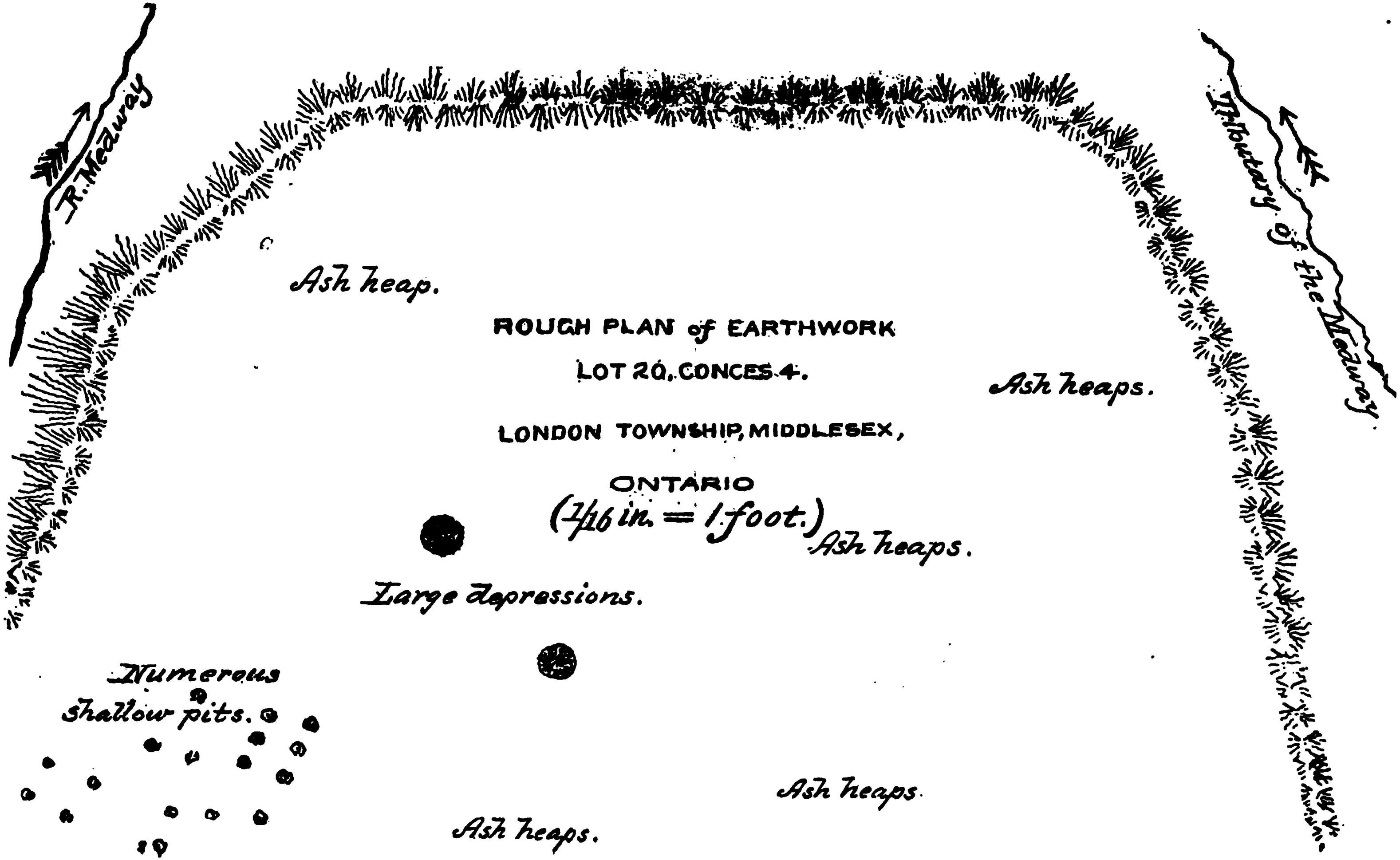
This land is covered with a dense growth of pine, many of the trees, Mr Stroh affirms, being from a hundred and fifty to two hundred feet high. In the neighborhood, wild fruit was abundant, including plums, cherries and huckleberries, and butter-nuts, beech-nuts and hazel nuts grew in profusion.

It is probable that in the near future the land here will be sold out for building lots and every vestige of the ancient earthworks will be removed, although it is not too much to hope that the people of two such enterprising and prosperous towns as are Berlin and Waterloo might see their way to unite in securing these fields for park purposes, and thus aid in preserving a pre-historic landmark which, as time advances, will be regarded with increasing interest. When it is too late, the unavailing query will be in the mouths of many, why was this not done?

The German people cannot be charged with indifference to matters of this kind; as a people devoted to the interests of education and of science generally they may look near or afar without fear of finding their superiors, and perhaps we shall yet learn that some public-spirited Teutons in both towns have taken this project in hand, determined to "put it through."

On the farm of Mr. R. Shaw Wood, lot 20, concessian 4, in the township of London there is the site of what may be called an ideal fortified town or village. The situation is not only commanding; it is romantically beautiful, occupying as it does part of a plateau more than one hundred feet above the streams that here unite at its base, and overlooking one of the most beautiful combinations of heavily timbered meadow and upland that can be seen anywhere in this country. Along the foot of the steep bank forming the northern side of this plateau flows the Medway, a tributary of the river Thames, and on the southerly side, nearly as precipitous as the other, a smaller stream which joins the former at the lowest point of the long slope, up which the summit may be reached from the east. The spot has long been known to relic-hunters, and large quantities of what should have been valuable material, have been dug from it. Unfortunately, in most cases, it is to be feared, the only object was to secure specimens without reference to any other consideration, and despite the objections of the proprietor, almost every foot of available surface has been turned over, until the original appearance of the place may only be guessed at, and as the work had to be carried on furtively, during Sundays and in the dead of night, one may readily understand how little attention could be paid to the making of accurate observations, even had the desire to do so been present in the minds of the diggers.

On the occasion of my first visit to this "fort," I was accompanied by Mr. Wolverton, L.D.S., an enthusiast in all that pertains to pre-historic life in Ontario. His private collection is large, and comprises much rare and correspondingly valuable material, which it is hoped will some day be placed on public exhibition with other private collections for the benefit of western students.



ROUGH PLAN of EARTHWORK
LOT 20, CONCES 4.
LONDON TOWNSHIP, MIDDLESEX,
ONTARIO
(1/16 in. = 1 foot.)

Mr. Shaw Wood, the proprietor, very kindly conducted us to the earthworks, where rough measurements were made of the embankments near the eastern end, at which part this could be done with least trouble.

This portion measures two hundred and fifty feet, embracing all the eastern side, and part of the two flanks overlooking the streams, but the latter extend much farther westwards, although their lines can be followed only with some difficulty. Near where they may be supposed to terminate, there are traces of another bank connecting these two extremities, and thus enclosing a space of three or four acres.

Mr. Wood having courteously granted me permission to make a somewhat thorough examination of all the ground, a second visit was made for this purpose, only to find that a few nights previously the most promising-looking spots had been attacked by a party of relic-hunters, and the ground was left in such a condition that anything one might find would possess little value beyond that of being a curiosity, or, in the language of the relic-hunter, a "curio." Advantage, however, was taken of the opportunity to verify former measurements, and to examine the ground more closely. Openings were also made at various places on the banks to discover, if possible, traces of stake holes, but after repeated openings were made none was found, and a deep cut dug to the base of the bank showed nothing but clean, gravelly soil.

Along the north side are numerous hollows from three to four feet in width, and averaging about a foot in depth. These seem to be arranged in series of three each, twelve to thirteen feet apart, and extend into an adjoining field on the farm belonging to Mr. McCoomb. We dug into several of these hollows, but found nothing to indicate their purpose. Depressions of a similar kind were observed on a hill at Parry Sound when that place was visited a few years ago, and others have been noticed elsewhere. As a result of the examinations made, these hollows on Mr. Shaw Wood's farm appear to have been originally about three feet deep. Perhaps they were used for storing grain.

Mr. Wood states that some years ago, before the surface was disturbed, he counted fourteen ash-beds, or camp-sites, on the area enclosed by this embankment.

The accompanying sketch of part of the earthworks on Mr. Wood's property shows what they look like along the part where they are seen to the best advantage.

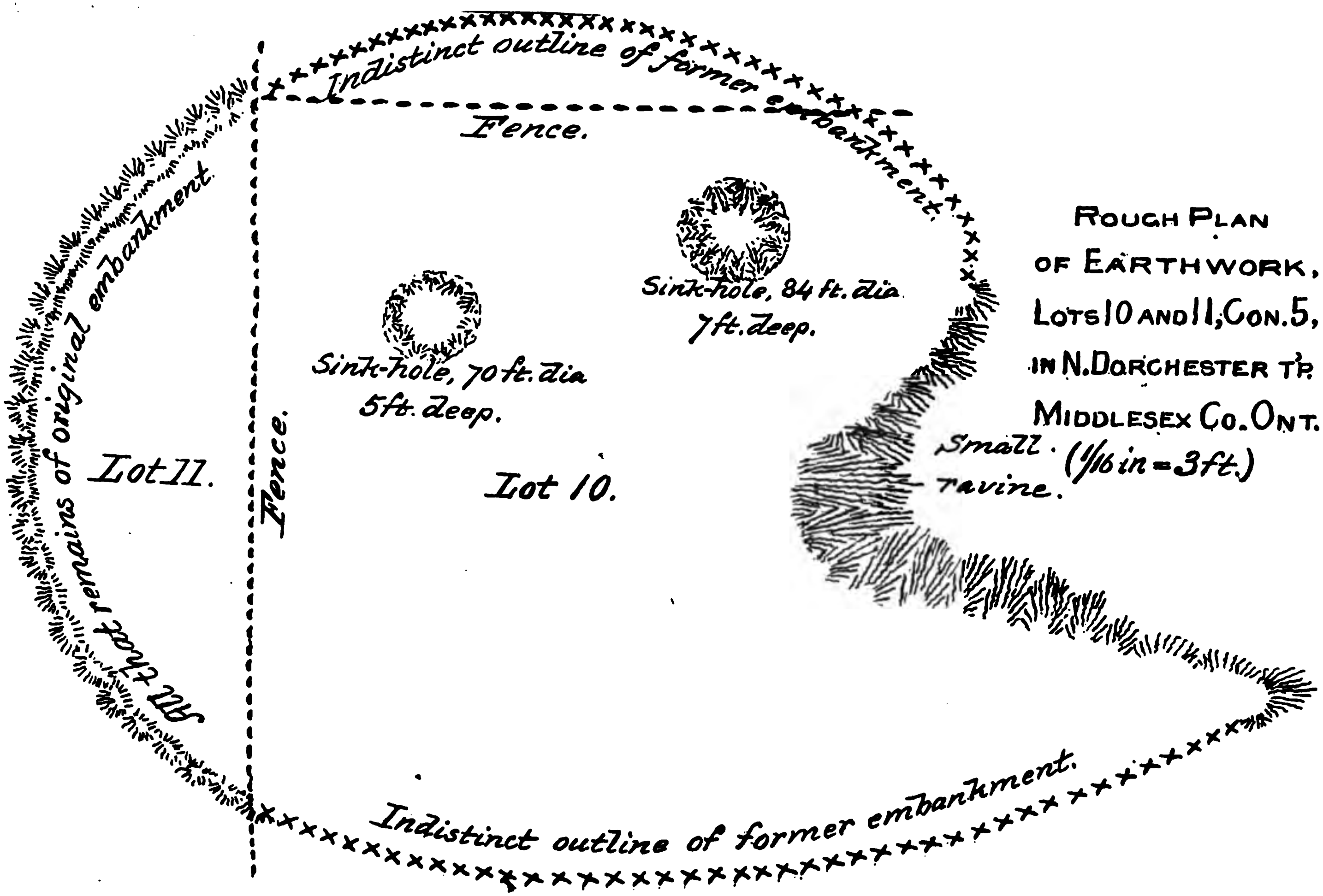
It may be observed that fragments of pottery may be picked up everywhere within the embankments.

This place is worthy of more minute examination, and a survey of it should be made in such a way as to embody every detail within the area.

It is a matter of pleasure to know that Mr. Wood's tastes are all in the direction of preserving this peculiarly interesting "fort" as nearly as possible in its original condition, and it is to be trusted that other persons will assist him in this most laudable endeavor.

Thanks are due to him for his many acts of courtesy, not the least of which was the presentation of a human skull found within the embanked enclosure. The skull in question presents the peculiar feature of a wormian bone at the frontal-parietal fontenelles, besides twenty-five similar formations along the occipital sutures.

On information supplied by Dr. Wolverton, of London, I visited a most interesting earthwork on lots 10 and 11 in the township of North Dorchester, county of Middlesex. On the former lot, years of cultivation have almost removed every



ROUGH PLAN
OF EARTHWORK,
LOTS 10 AND 11, CON. 5,
IN N. DORCHESTER TP.
MIDDLESEX CO. ONT.
(1/16 in = 3 ft.)

Indistinct outline of former embankment.
Fence.
Sink-hole, 84 ft. dia
7 ft. deep.
Sink-hole, 70 ft. dia
5 ft. deep.
Small ravine.
All that remains of original embankment.
Lot 11.
Fence.
Lot 10.
Indistinct outline of former embankment.

semblance of a bank, but on lot 11 the original owner took especial pains to preserve that portion of the embankment which lies on his property, and his son, Mr. Oswald Jackson, now in possession, is equally solicitous that nothing shall be done to destroy it.

Viewing the works from the western end, on lot 11, there is apparently nothing in the situation to justify its claim as a fortified encampment. The land is level, and there is no water within sight. On lot 10, however, the property of Mr. Sharpe, there are two large sink-holes, which no doubt, in former days, held a perennial supply of water, and it would seem evident that the presence of these must have mainly influenced the selection of the spot as a village site.

The untouched and only remaining portion of the earthwork projects itself into Mr. Jackson's field almost as an arc of a circle. Its greatest distance from the fence line being ninety-three feet, and the distance between the northern and southern extremities of this arc, in a straight line, is three hundred and eighteen feet. Measured from the middle of the ditch that runs along the outside, the bank varies in height from two to four feet, and its width across the base is from twelve to eighteen feet. A few stumps of considerable size remain on the bank. One of maple near the south end is two feet six inches in diameter, and another of beech is two feet ten inches. Portions of the sod were stripped from the surface in several places in search of the remains of old posts, or traces of post holes, but none appeared.

So far as the portion of the earthworks under cultivation was concerned, reference was made to Mr. B. F. Sharpe, who remembers distinctly the old line of the embankment. Under his guidance the ground was gone over, showing that the area was in shape like a palette, the northern and southern banks terminating at the east end of a little ravine or hollow. On account of the field being in crop, it was not possible to take any measurements, but this was done subsequently by Messrs. Sharpe and Jackson, and the results forwarded to me. According to these the greatest length of the works is five hundred and seventy feet from east to west, four hundred feet to the head of the ravine, and about the same distance from north to south. Mr. Sharpe, senior, states that the banks did not meet on the east side, and that according to his recollection the ends were at least twenty rods apart. This would mean that no earth was thrown up round the curve formed by the natural hollow facing the east.

The sink-holes referred to form the chief feature within the line of banks. The larger one towards the north-east is at present eighty-four feet in diameter, and in the middle is seven feet deep, the other one is only seventy feet in diameter and five feet deep. These holes are said to have been fully twelve feet in depth when the land was "in bush," but for many years attempts have been made with the plough, to fill them up.

A pond known as Whittaker's Lake is not far distant, and from this source, as well as from Kettle Creek, its outlet, pike, bass and perch were easily procurable. Only five miles away the river Thames flows. Beaver dams are said to have been numerous on the smaller streams running into Kettle Creek. Wild turkeys were no doubt plentiful, and the woods yielded stores of plums, butternuts, walnuts and hickory nuts. Five miles off there is a marsh that still yields large quantities of huckleberries.

In the woods that stand adjoining this earthwork, on Mr. Jackson's farm there are many ash-beds, and in a few places graves seem to have been made.

It affords great pleasure to know that all that remains of this somewhat extensive earthwork is likely to be kept intact by Mr. Jackson, the intelligent proprietor of the farm. To himself and the various members of the family thanks are hereby presented for the many courtesies extended by them. The season was a busy one when the place was examined, but Mr. Jackson devoted much time to going over the ground for a considerable distance round the "fort," and made many openings in the soil, both to show where he knew ash-beds existed and to discover others.

It is in this section of the Province that the largest number of such earthworks are known to exist. It is highly probable that there are, or have been, others in adjoining townships. We know of several in the township of Malahide, county of Elgin, and not far away is the famous double embanked works of Southwold, which it is hoped will soon be acquired by the municipal authorities to be held as public property. Farther west still we may expect to hear of similar structures, to search for and examine which should be part of next year's work.

In connection with the Southwold works it should be mentioned that since they were described in one of our reports, the ground has been surveyed by Mr. A. H. Campbell, C.E., who very kindly presented the museum with an accurate plan from which a plaster model has been constructed. The untimely death of Mr. Chester Henderson, who owned the farm on which the earthworks are situated, may cause delay in steps being taken to secure the few acres required, but the activity and zeal of the Elgin Historical Society may be depended upon to do everything possible by way of attaining this object.

SHALLOW PITS.

Reference has been made in former reports to the occurrence of rows of shallow pits, similar to those on Mr. Wood's farm in London township. One of the most remarkable instances of these is in the township of Bexley, a few miles from Victoria Road station. These were examined last summer by Mr. Geo. E. Laidlaw and myself, but we could arrive at no satisfactory conclusion as to the manner of their use. That they are of artifical formation is undoubted—their situation, proximity and arrangement make this perfectly clear. Like those on Mr. Wood's farm, they are close to a village site, they are within a few feet of each other, and appear to form a group of rows. We opened several of them to a depth of ten feet, or until the undisturbed soil was reached, but in no case was there anything to indicate a purpose in making such pits. The absence of charcoal and ashes gave no color to the supposition that they had been fireplaces, and the probability is that they were used as *caches* for corn.

To refer to them as rifle pits is too absurd, and it is scarcely less so to regard them as having been employed for purposes of ambush at a time when the whole of the country was forest-clad, and such an artificial method of forming hiding-places was wholly unnecessary.

Had they been connected with posts forming an enclosure, they would not now appear as depressions, and they certainly were not graves, if one may judge from the total absence of anything to indicate such a purpose.

In the present exceedingly rough condition of the ground, covered as it is with fallen timber and considerable undergrowth, it is impossible even to count the number of pits, far less to arrive at any conclusion regarding their arrangement, as it relates to the whole of the area they occupy. So far as we could form any estimate at all, there are not fewer than fifty of these hollows. Within a hundred yards of them flows an important branch of the Talbot river.

MUD LAKE EMBANKMENT.

On the farm of Mr. John McEwen, lot 15, concession 11, Drummond township, Lanark county, a peculiarly artificial looking bank, several hundred yards in length, extends along the edge of Mud Lake, turning inland towards the southern end. While the appearance of this bank as a whole gives the impression that it is of human origin; when examined in detail, superficially, it seems to be of natural formation. On the one hand there does not appear to have been any possible advantage in the artificial construction of an embankment at this place, while on the other, the configuration of the adjacent land makes it difficult to supply a geological reason for the existence of so long and sharply defined a reef. Some openings should be made to ascertain how it is put together.

OSSUARIES.

The presence of a bone-pit, or communal grave, has hitherto been regarded as sufficient proof that the district was within the territory occupied by the Hurons, but the fact that examples of ossuary sepulture are found so far away as Manvers, the nearest point of which is twenty-four miles south-east of Lake Simcoe gives rise to one or two queries. Was this within the limit of the Huron country? Or, was it only occupied by some offshoot of these people? Or was this method of burial adopted by a neighboring people? Or had this been a place of sojourn by the Hurons on their way towards the other side of Lake Simcoe?

However this may have been, it is undoubted that the presence of ossuaries in this part of the country is exceptional, although it is now known that there are at least two—one on the farm of Mr. Syer, and the other on lot 18, concession 8, belonging to Mr. Robert Fallis.

Having learned from Mr. R. W. Perry of the one on Mr. Syer's farm, and having received permission from the owner to open the pit, I was fortunate in securing the services of Messrs. A. and A. B. Clifford for that purpose. Unlike most ossuaries in the Huron country proper, this one is on comparatively low ground.

Before being opened it presented a rather unusually deep depression of nearly three feet, and eighteen feet in diameter, almost circular. Portions of it have been tampered with at intervals during many years, but no thorough examination of it was ever made. As the conditions seemed favorable, notwithstanding former openings, it was resolved to clean it out thoroughly. Two feet below the surface bones were reached in the undisturbed part of the pit, the bottom of which was struck at a depth of six feet in the centre. Approaching the sides, the bottom rose gradually until it was not more than five feet deep. It was a matter of impossibility to make any exact reckoning of the number of skeletons contained here, but it could not have been far short of six hundred, taking the skulls as a basis, although in most instances these had fallen to pieces. They were placed in groups of from four, to six or seven, both above and below the other bones without any reference to order, so far as could be seen. The limb bones appeared to have been in bundles, from the way they lay across each other, and I was able to secure three such bundles just as they were originally deposited, but of course whatever had been used to tie them together was wholly decayed. Ribs, vertebræ and small bones generally, appeared in confused masses, but this may have been brought about by disturbance consequent on the subsidence of the soil. This ossuary was wholly barren of anything in the shape of relics. Not a flake of a flint, nor a fragment of pottery was seen during the two days engaged in the work of opening. We were, however, amply rewarded by procuring fifty-seven very good crania, many of them showing wormian bones.

The soil in which this pit was dug is a rich sandy loam. A village site may be traced in a field only a few hundred yards from the grave.

Th ossuary, some five or six miles further east, on Mr. Fallis's farm, occupied a position more in keeping with the practice of the Hurons in selecting such burial places, as it is on one of the highest points in a hilly part of the township. Rain prevented us from going very far with the work of opening, but in any event the appearances indicated frequent disturbance, and we were informed that there was not the least likelihood of getting even a whole skull.

The most important feature connected with this ossuary is the fact of its position so far east, and to be able to record this alone, is of some value.*

A small ossuary was accidentally discovered by Mr. A. Bowman on his farm, lot 72 concession 2, township of Flos, Simcoe county. Dr. McClinton of Elmvale, who kindly accompanied me to this place, and otherwise extended many courtesies, on seeing all the bones that had been carefully removed by Mr. Bowman, came to the conclusion that this burial place had contained the remains of about twenty-five persons. Most of the skulls and many of the other bones were in a fragmentary condition, but five very good specimens of the former, and three somewhat imperfect, besides numerous specimens of the latter, chiefly of the limbs have been added to our collection from this place. That the burial was of post-European date was evidenced from the fact that along with the remains were found six iron tomahawks of French make, a small copper pot, or kettle, very much decayed, and four brass finger-rings, bearing on the seal the letters I. H. S. identical in pattern with one presented to us from another grave in Simcoe, by the Rev. Mr. Laboreau, of Penetanguishene, in 1887.

Besides these there were seventeen small discoidal, wampum beads and twenty-eight of the much rarer variety, formerly known in some of the Atlantic states as "runtee"; they are roughly quadrangular in form, from five-eighths of an inch to an inch and a quarter long, (*i. e.*, measured in line with the hole, which is bored edgewise) and the width of most of them is about a third less than their length, but some are almost square, and one is wider across the hole than in the opposite direction. The thickness too, varies very much—from three-sixteenths to three-eighths of an inch, and as no attempt has been made to reduce the original irregularities of the shell single specimens are not of uniform thickness. The foregoing particulars are mentioned for the purpose of showing that in all probability these were made by the natives, for it is well known that at Hakensack, New Jersey; Albany, New York; and perhaps elsewhere, wampum was manufactured in immense quantities by the Dutch.

All the material from this ossuary, except the brass finger-rings are now in our cases.

REPORTED STONE CHANNELS.

It is commonly reported that at certain places along the banks of the River Mississippi where it flows through Drummond township, there are graves a short distance from the water's edge, with which they are connected by narrow tunnels or passages made of stone. On one occasion Dr. Beeman and myself spent a day in searching ineffectually for even one such grave. A farmer who was thought to know all about these peculiarly constructed graves took us some distance in a canoe to point out where a few of them might be seen, but the places bore no resemblance to graves, and the tunnels were not visible.

---

* Mr. A. F. Hunter writes to me that he has heard of one in Harvey township, Peterboro', north-east of Manvers.

Last summer at Innisville, in this township, we met Mr. George Code, one of the oldest settlers, who assured us that about thirty-five years ago when excavations were being made for the foundation of a house, a drain-like structure of cobble-stones was found to run towards the Mississippi for a distance of more than fifty feet. The channel, he stated, was about a foot square, and the work of construction was roughly performed, the drain being neither straight, nor uniform as to grade. At one point, he said, it passed under a pine four feet in diameter, and where it reached the river the mouth of it was covered with a large flat stone. He also informed us that a similar passage was found a short distance farther down the river. No traces of these now exist.

SUPPOSED STONE WALL.

On the farm of Mr. William Armitage, lot 14, concession 4, township of Biddulph, Middlesex county, there is what looks like the foundation of a rough stone wall. Mr. Wm. Matheson and myself examined this very superficially. Mr. Armitage says it was there when the land was settled, but he has no knowledge of its origin. A deep hole, that may have been a well exists near by, although now partly filled up. If this should prove to be a wall artificially put together, it will probably point to some permanent station of the French missionaries previous to 1650. It would be worth while to settle this, by making a few openings or by laying the whole structure bare if necessary. In view of the work on which General Clark of Auburn, New York, has for so many years been engaged, namely, the preparation of a map of Ontario marking the sites of Indian towns or villages mentioned in the early French records, it would be satisfactory to be able to say whether any outpost had ever been established at this point.

To the Canadian historian, General Clark's work along this and some other lines must prove invaluable. Hitherto, the exact situation of nearly every place mentioned in early documents has been mainly or altogether a matter of conjecture, and opinions of writers have differed so seriously as in some instances to be flatly contradictory of each other. It is easy, therefore, to see that where so much confusion is possible among authorities, the casual student must find it extremely difficult to read to the best advantage. The missionaries were not concerned to take observations of latitude and longitude—they simply state that they travelled so many days or hours, in this or that direction, and reached a town known as so-and-so. With such meagre data it would seem out of the question to arrive at indisputably definite determinations, and such evidently has been the feeling of all who have hitherto approached the subject—even Dr. Parkman's delightfully written narratives afford scarcely any assistance by way of enabling us to place our finger on, or even very close to, particular spots, with the remark, "Here was such and such a town."

It has remained for General Clark to grapple with this subject by severely critical methods, and after many years of devotion to the close comparison of all existing records, and copies or originals of numerous early maps, to reach conclusions which he hopes will go far towards placing our knowledge on a sound basis.

ROCK PAINTINGS, OR PETROGRAPHS.

In the evolution of alphabetic forms, or forms representing elementary sounds, it is perhaps safe to concede that picture-drawing succeeded sign-language. A tremulous, horizontal motion of the hand to indicate water, would suggest a zig-zag line as an equivalent pictograph—objects of all kinds, natural and artificial were employed, first *literally*, if we may use the expression here, and afterwards, to some extent, figuratively. Conventionalization soon followed, and what at best were only poor imitations became much abbreviated; the human form lost nearly all its original semblance, to appear only as a forked T-like figure, and beasts and birds were reduced to mere foot prints. In Mexico, the rebus and phonetic stage was reached by the Indians, and it was possible by means of the characters employed to write a connected, grammatical narrative. But neither the Algonkian nor Huron-Iroquoian people who occupied this latitude, attained to so much excellence in recording thought—they did not advance beyond the pictograph stage; at least they had not so advanced when the white man's advent precluded further development, by bringing about a condition of things that obviated any necessity for it, or by introducing disturbing elements tending rather to confirm the natives in traditional customs and practices, than to stimulate or encourage them to possible progress in this direction. It is needless to discuss the likelihood of our aborigines reaching an alphabetic form had they been left to themselves, all that now concerns us is the fact that they did take one or two steps in that direction, and the examples they have left us of their pictographic art are, confessedly, among the best illustrations the world affords of those primitive conceptions, which, everywhere and always much alike, have, in favorable circumstances, led to the achievement of what we call Literature.

So important is the subject of Indian picture-writing regarded by the United States Bureau of Ethnology, that Director, Major J. W. Powell has devoted to it the whole of the eight hundred page volume issued in 1893. The author, Col. Garrick Mallery may here be quoted as to the importance of the study :—

"The importance of the study of picture-writing depends partly upon the result of its examination as a place in the evolution of human culture. As the invention of alphabetic writing is admitted to be the great step marking the change from barbarism to civilization, the history of its earlier development must be valuable. It is inferred from internal evidence, though not specifically reported in history, that picture-writing preceded and generated the graphic systems of Egypt, Assyria and China, but in America, especially in North America, its use is still current. It can be studied here without any requirement of inference or hypothesis, in actual existence as applied to records and communications. Furthermore, the commencement of its evolution into signs of sound is apparent in the Aztec and Maya characters, in which transition stage it was arrested by foreign conquest. The earliest lessons of the genesis and growth of culture in this important branch of investigation may, therefore, be best learned from the western hemisphere. In this connection it should be noticed that picture-writing is found in sustained vigor on the same continent where sign-language has prevailed and has continued in active operation to an extent historically unknown in any other parts of the world. These modes of expression, *i.e.*, transient and permanent thought-writing, are so correlated in their origin and development that neither can be studied to the best advantage without including the other. Unacquainted with these facts, but influenced by an assumption that America must have been populated from the eastern hemisphere, some enterprising persons have found or manufactured American inscriptions composed of characters which may be tortured into identity with some of the Eurasian alphabets or syllabaries, but which sometimes suggest letters of indigenous invention. * * *

When a system of ideographic gesture-signs prevailed and at the same time any form of artistic representation, however made, existed, it would be expected that the delineations of the former would appear in the latter. It is but one and an easy step to fasten upon bark, skins, or rocks the evanescent air-pictures that still in pigments or carvings preserve their ideography or conventionalism in their original outlines. * * * * * *

The execution of the drawings, of which the several forms of picture-writing are composed, often exhibits the first crude efforts of graphic art, and their study in that relation is of value.

When pictures are employed for the same purpose as writing, the conception intended to be presented is generally analyzed and only its most essential points are indicated, with the result that the characters where frequently repeated become conventional, and in their later form cease to be recognizable as objective portraitures. This exhibition of conventionalizing has its own historic import.

It is not probable that much valuable information will ever be obtained from ancient rock carvings or paintings, but they are important as indications of the grades of culture reached by their authors, and of the subjects which interested those authors. * * * * * *

Some portions of these pictures can be interpreted. With regard to others which are not yet interpreted and perhaps never can be, it is nevertheless useful to gather for synoptic study and comparison a large number of their forms from many parts of the world. * * * * Indications of priscan habitat and migrations may sometimes be gained from the general style or type of the drawings and sculptures, which may be divided into groups, although the influence of the environing material must always be considered."*

A little further on in the volume already quoted (pp. 34-35), Col. Mallery says:—" It must be admitted that no hermeneutic key has been discovered, applicable to American pictographs, whether ancient on stone, or modern on bark, skins, linen, or paper. Nor has any such key been found which unlocks the petroglyphs of any other people. Symbolism was of individual origin, and was soon variously obscured by conventionalizing; therefore it requires separate study in every region. No interpreting laws of general application to petroglyphs so far appear, although types and tendencies can be classified. It was hoped that in some lands petroglyphs might tell of the characters and histories of extinct or emigrated peoples, but it now seems that knowledge of the people who were the makers of the petroglyphs is necessary to any clear understanding of their work. The fanciful hypotheses which have been formed without corroboration, wholly from such works as remain, are now generally discarded. * * *

Rock-carving, or picture-writing on rocks, is so old among American tribes as to have acquired a nomenclature. The following general remarks of Schoolcraft are of some value, though they apply only with accuracy to the Ojibway, and are tinctured with a fondness for the mysterious:—

'For their pictographic devices the North American Indians have two terms, namely, *Kekeewin*, or such things as are generally understood by the tribe, and *Kekeenowin*, or teachings of the *medas*, or priests, and *jossakeeds*, or prophets. The knowledge of the latter is chiefly confined to persons who are versed in their system of magic medicine, or their religion, and may be deemed hieratic. The former consists of the common figurative signs, such as are employed at places of sepulture, or by hunting or travelling parties. It is also employed in the *muzzinabiks*, or rock writings. Many of the figures are common to both, and are seen in the drawings generally; but it is to be understood that this results from the figure alphabet being precisely the same in both, while the devices of the nugamoons or medicine, wabino hunting and war songs are known solely to the initiates who have learned them, and who always pay high to the native professors for this knowledge.' "

---

* Picture-writing of the American Indians by Col. Garrick Mallery, pp. 26-28. Tenth Annual Report of the Bureau of Ethnology for 1888-'89. Washington, 1893.

As between the peoples who have occupied this portion of the continent—Huron-Iroquois and Algonkins—the pictographic art would appear to have been in most favor with the latter. In almost every area known to have been occupied by Indians of this stock, numerous examples of petroglyphs and petrographs are on record, while in the territory held by the former little or nothing of this kind exists that may be declared authoritatively Iroquoian. Among Algonkins, the Ojibwas exhibited a fondness for recording important events on stone, bark and skin, and consequently they attained to a higher excellence in pictography than was reached by some others of the same great division.

Hovering for centuries, probably, so far as Ontario was concerned, near the northern limit of what, for the time being, the Iroquois may have been pleased to regard as their own territory, and being, we may assume, most of the time either on the offensive or defensive with respect to their more southern neighbors, it will readily be understood that the Ojibwas in this part of the country found many events worthy of being recorded by the finger and paint-pot of the tribal artist-historian on the rocky cliffs that present themselves so frequently throughout the region they held. In the course of time, some, perhaps most of such records, have disappeared; indeed the wonder is that any exist at all, for the pigment was probably tempered with water only, but even though oil had been used for this purpose, the lapse of no more than a century of exposure to the elements is a severe test of color permanency. In every part of the world red was the color most commonly employed in rock paintings, and the Indian of Ontario used for his work, hematite, one of the most durable pigments known.

ROCK PAINTINGS AT LAKE MASSANOG.

Although there can be little doubt that few places within a hundred miles or more on the north side of the St. Lawrence and Lake Ontario were unvisited by the Iroquois in the course of their hunting expeditions and their vengeful raids, it does not seem probable that they held permanent sway for more than half of that distance beyond the shore, from the county of Hastings eastwards to the Ottawa. Even such simple agricultural operations as they carried on were likely to meet with more success to the south of this limit than northwards, but perhaps the chief reason they had for establishing their "towns" and "castles" (as the old writers called these habitations) in territory adjacent to the large lake and river, was the facility thus afforded to their movements by the water. It is, at all events, clear that the eastern interior of Ontario has been occupied by a people not Iroquois, or Huron-Iroquois, if any reliance is to be placed on the dissimilarity that exists between the relics found in this part of the province, and those that are known to be of Iroquoian origin. Speaking broadly, there is a tinge of Innuit influence perceptible in some of the material found, that is not observable farther south or west. The line of the Canadian Pacific Railway from Ottawa to Peterborough, and of the Midland Railway from Peterborough to Penetanguishene, may be assumed to mark roughly the northern limit of Huron-Iroquois influence For most of the distance traversed by the former railway through the counties of Addington and Frontenac the surface of the country is hilly and rocky, forming to some extent a natural barrier between the fertile south, and numerous comparatively fertile stretches to the north. Beyond this it is not likely the Iroquois found many inducements to proceed, nor is it probable that the Algonkins frequently penetrated far beyond it to the south. Across the townships of Kaladar and Kennebec this feature of the topography is strongly marked, and the rocky heights here attain to the dignity of being styled the "Bald Mountains." About twelve miles due-north of Kaladar station, and about fifteen or sixteen by a road which is anything but straight, the southern end of a long and narrow lake, known as Massanog,* may be reached. Lake Massanog stretches in a northerly direction throughout the greater portion of the township of Barrie into the township of Abinger, a distance of some twelve or fourteen miles. The lower end, called the Little Massanog, about four miles long, is almost cut off from the main body by a tongue of land extending from the western shore until it comes within about nine yards of the rocks that form the eastern side. Beyond these "narrows" the lake stretches north by west, until, as already mentioned, it passes into Abinger.

For fully two miles south of the narrows, and to quite as great a distance beyond them, towards the north, the eastern side of Lake Massanog is a precipitous wall of primary rock, rising from a hundred to a hundred and eighty or two hundred feet above the lake level. The whole mass appears to have been thrown up by a force acting from the north until the dip of the strata is now almost exactly forty-five degrees.

Our information was to the effect that certain artificial markings or paintings existed on the face of these rocks, north of the narrows, and the canoes of our party were accordingly headed thither. Warned by many disappointing experiences, my belief in the existence of real rock paintings was very weak. I was prepared to see streaks and stains, the result of oxidization, but no work of human agency, although I had heard of such at this place many times during the last twenty years.† It did not, however, take long to convince even the most cautious, or the most skeptical that the markings here were the work of man, and of savage man. On nearly every available bit of smooth surface were traces of a red pigment. In a large number of instances these had become too indistinct to follow, but others were tolerably plain, either in part or as a whole. The work was done in a dull red color, probably hematite, the faded appearance of which did not contrast very strongly with the dingy brown of the rock itself, but in a few sheltered places the outlines came out more sharply, both because the color was brighter, and the rock was less weather-stained.

Dr. Beeman was provided with a camera, but, notwithstanding that the day was bright, and the water mirror-like, it was found impossible to secure satisfactory pictures of the markings, owing chiefly to the lack of sufficient contrast between the natural and artificial colors, even when these were distinct enough to the eye.

Anticipating possible non-success in this line we took the precaution to make sketches in pencil, measuring the various parts of the designs as well as we could from the boat, for it was impossible to land anywhere, the rocks rising sheer from the water's edge.* This, however, presented the advantage of allowing us to make a close and critical examination of the paintings, which, as may be seen from the accompanying illustrations, are chiefly, perhaps altogether, mnemonic signs, coming under the head of "notices," according to Col. Mallery's classification. The drawings or paintings, as they are called, begin about a mile from the Narrows, as we sail northwards, and appear at intervals for fully another mile; the places selected for the work being those that presented the smoothest surface, irrespective of the direction in which they faced. The drawings were grouped in these places as shown by the numbers in the illustration, but each group was so far from any other that there was no probability of a connection, so far as import is concerned. In no place was there any appearance of painting at heights beyond reach from a canoe or from the ice, as they were seldom more than seven feet above the water, and reached as low as within two feet of it.

---

*Also Massanaw, Mazanog, Missinog, Mishenog, Missinoque, Michenog, and Mitchenoug.

†It was chiefly on account of a recent visit made to this place by Messrs. W. O. Caldwell, of Lanark, and R. J. Drummond, of Perth, that our expedition was undertaken. These gentlemen on their return expressed themselves to the effect that there could be no doubt relative to the artificial character of the drawings or markings made on the Massanog rocks.

The markings or drawing were in bands, or broad stripes from one to two inches in width. Sometimes it was with difficulty that even the direction of a line could be followed with any degree of certainty, but nothing was placed on paper until the rock had been scrutinized by five or six pair of eyes, viewing the figures at different angles and at various distances. Some of the more weathered outlines showed most distinctly at the distance of a yard or two away, e. g., figs. 27, 28, 34 and 38, plate II., but the brighter ones presented no difficulty at any reasonable distance.

However, notwithstanding all the care that was exercised, those who know how easy it is for error to creep in when one is copying indistinct and unknown characters, will readily understand that other persons might, in doubtful cases, give figures varying in some degree from those here presented. This applies more particularly to figures 34 and 38, which are so grotesque looking, and to figures 28, 33 and 36, plate II., resembling lines laid down by a land surveyor when laying out town lots. One's imagination, or even his desire to see some special shape, may lead him, more or less unconsciously, to give a line a twist or a turn that another might reverse, or perhaps not observe at all. Then, too, the position of the observer, the time of day, and the condition of the atmosphere all affect, to some extent, the appearance of much weathered and correspondingly indistinct tracings on a sombre colored rock surface. So much is this case that even the same observer on two or more occasions might produce so-called copies wholly dissimilar from each other, and all unlike the work of another copyist. In the instances referred to, and, possibly, to a slight extent, in a few others not sharply defined, this should be taken into account. On several portions of the rocks there are evidences that other drawings or paintings once existed, but these are now so nearly obliterated that no outline can be followed. In many cases the lines, although not sharply marked, are yet sufficiently so to enable anyone to distinguish the design. This is especially true of nearly all the figures on plate I., and where most difficulty existed regarding forms shown in plate II., the blurred or washed out portions are indicated by dots.

The series of parallel, perpendicular and oblique lines, from two inches to a foot in length were probably intended for numeration purposes. On plate I. examples of these are shown as they stand dissociated from any other markings (figures 1 to 7 and 9), while on plate II. records of this kind are found along with some that cannot be so classified.†

---

* At this part of Lake Massanog the water is said to be three hundred feet in depth within a yard of the rocks.

† It should be mentioned that the arrangement here shown has no reference to their position on the rocks for two miles north and fully half as far south of the Narrows. All the groups are given as they appear, but it is not at all likely that one of them had any reference to another. I now regret, however, that we were not careful to note the relative positions of the groups.

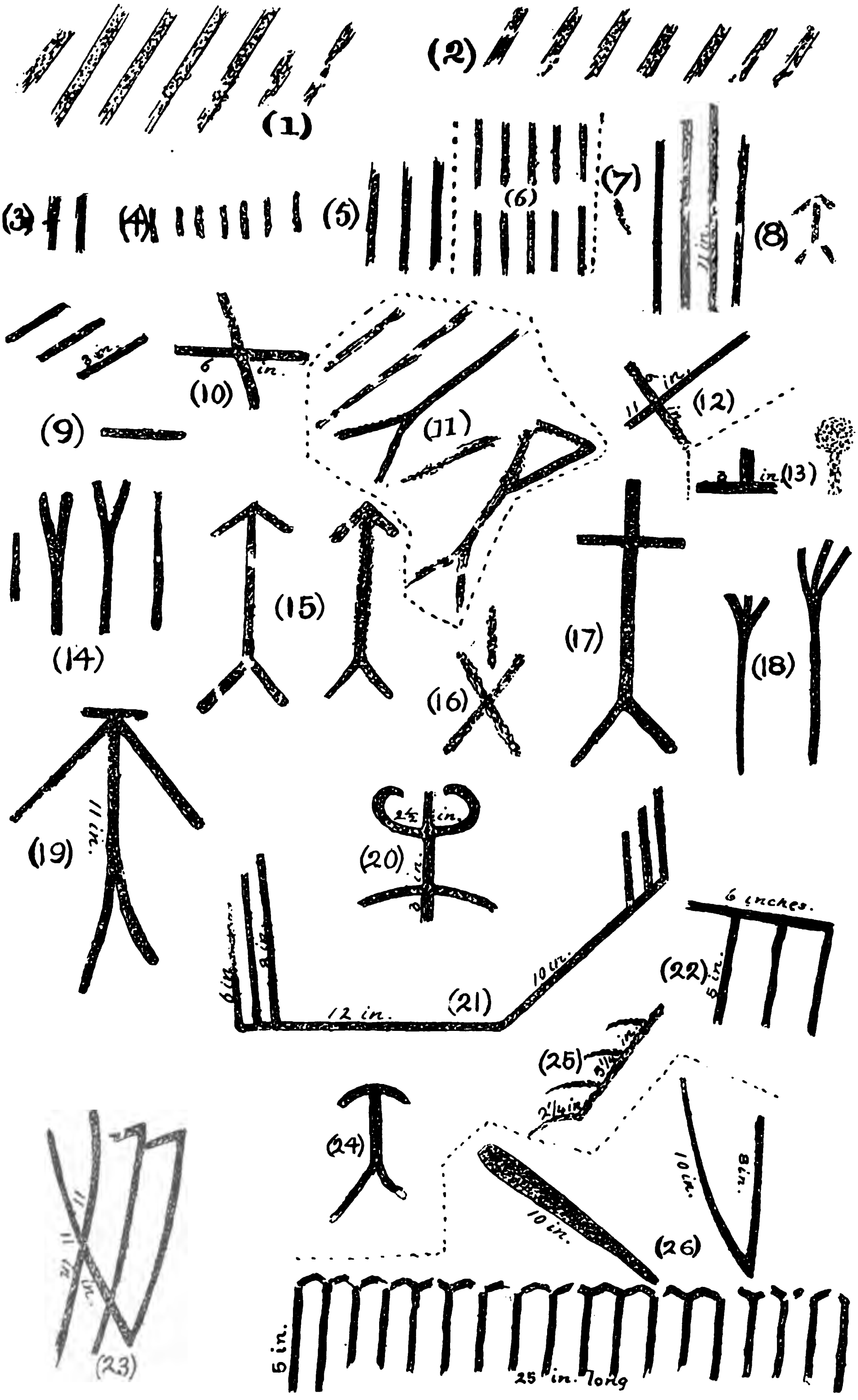

(1)
(2)
(3)
(4)
(5)
(6)
(7)
11 in.
(8)
3 in.
6 in.
(10)
(9)
(11)
6 in.
11
(12)
3 in.
(13)
(14)
(15)
(16)
(17)
(18)
11 in.
(19)
2½ in.
(20)
2 in.
6 in.
8 in.
12 in.
(21)
10 in.
6 inches.
(22)
5 in.
(25)
3¼ in.
2¼ in.
(24)
10 in.
8 in.
10 in.
(26)
11
11
in.
(23)
5 in.
25 in. long

Plate III.

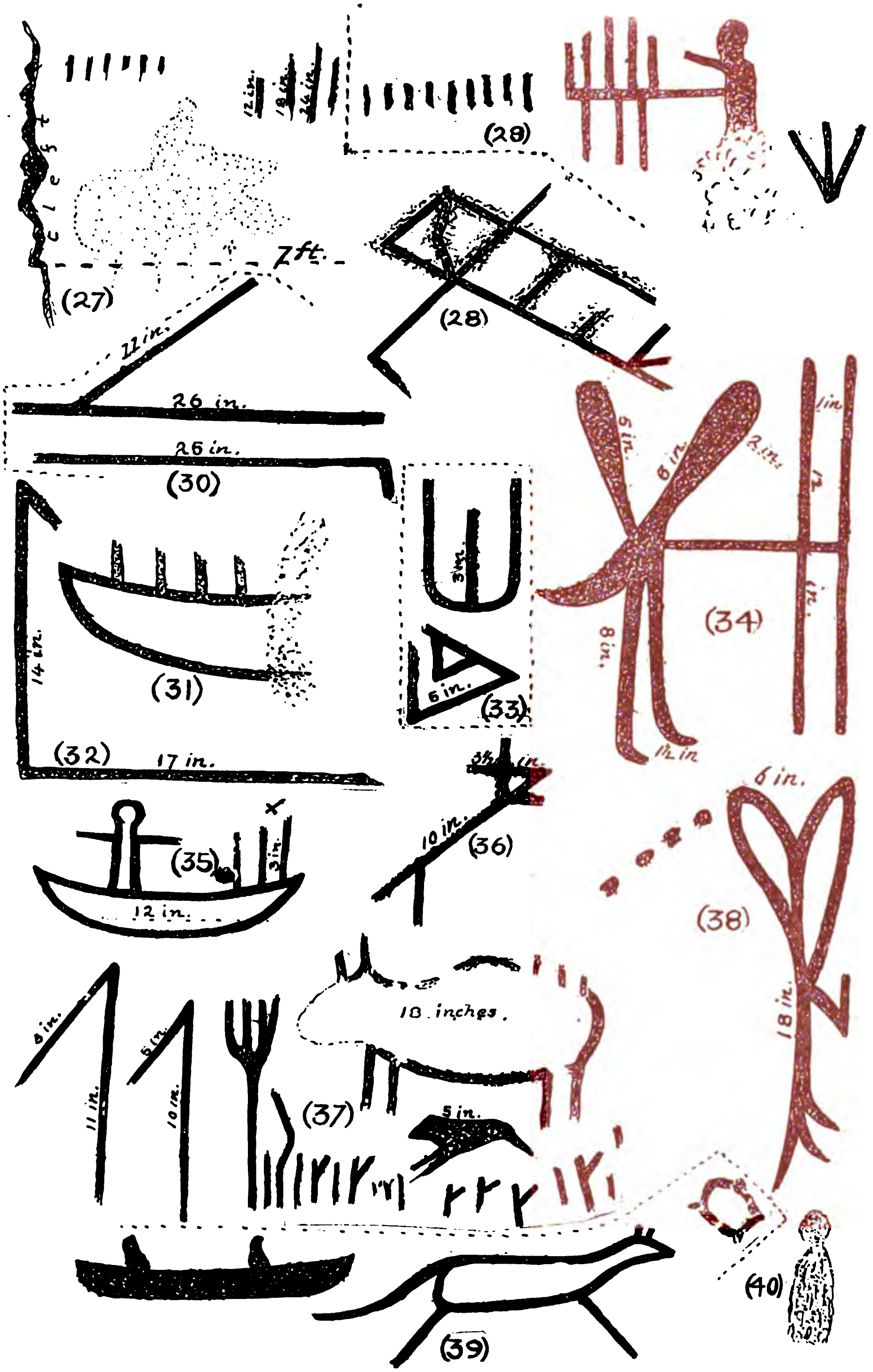

cleft
(27)
7 ft.
12 in.
18 in.
24 in.
(29)
(28)
22 in.
26 in.
26 in.
(30)
14 in.
(31)
(32)
17 in.
3 in.
5 in.
(33)
5 in.
6 in.
2 in.
1 in.
8 in.
1½ in.
(34)
3½ in.
10 in.
(36)
(35)
3 in.
12 in.
6 in.
(38)
18 in.
8 in.
5 in.
11 in.
10 in.
18 inches.
(37)
5 in.
(40)
(39)

PLATE IV.

Figures 8, 10,* 11 and 12 look like direction marks, as do the arrow-like drawings, but it is puzzling to decide how they could have served such a purpose, painted as they are on a perpendicular surface. Some of the arrow forms may have been meant to represent men, as may also have the upright forked crosses, in accordance with what we know to be the practice elsewhere among Indians. We are tolerably safe in reading the figures 14 and 18 as trees, but the other drawings on this plate convey no meaning to us, unless we deduce from figure 26 a suggestion of thunder and lightning, on account of the resemblance the fence-like part bears to clouds from which rain is falling ‡—but this, like any other guess, may be far astray.

Figure 27, plate II., covers the largest area of rock surface. Beyond the straight lines, the longest of which measures two feet, nothing is clear, but beneath these is a mass of blurred and half-faded pigment, which at a distance of five or six yards suggests a man on horseback, but this is quite out of the question, unless we see more reason to assign a comparatively recent date to the petrographs. Figure 28 forms part of this group, but has been placed half its own width too low in the plate to make room for figure 29.

In the latter group we see what is perhaps meant for a human figure. The lower portion is indistinct, but close behind, a three-barred symbol is quite plain.

Figure 30 should be nearly perpendicular, inclining only a few degrees to the left, and resting on the foot-like projection.

Figure 31 is suggestive of a canoe, and there can scarcely be a doubt that one is represented by figure 35, in which a man is standing. In the position occupied by the small cross above this canoe, figure 12, plate I., should be understood, but want of room has crowded it out of place.

Figures 37 and 39 seem to tell complete stories. In the former we have what was probably intended to depict a moose, although, owing to the absence of the head outline, this is only a matter of supposition. The smaller animal may be a dog, and the branching upright a tree, but beyond this we cannot even guess. The length of the "moose" is a foot and a half, and of the "dog" five inches. The dotted outline to indicate the head of the larger animal is almost purely imaginary. I have seen a hurried sketch made by Mr. R. J. Drummond, of Perth, giving the head a very different appearance, and Mr. Drummond is an excellent amateur artist. The upright lines on the back are inexplicable.

Figure 39 is probably intended as a hunting event—the canoe, the wolf, or deer and the turtle completing the group, although the last mentioned is somewhat indistinct. But for the length of its tail the other animal might be taken for a deer, which had been driven into the water by the men in the canoe.

The last figure on plate II. looks like that of a man, but it is somewhat obscure.

The dimensions given on some of the lines will enable the reader to understand the proportions of these Lake Massanog, muzzinabiks, or rock-paintings.

---

* Referring to a western Algonkian tribe, Col. Mallery says, "The cross signifies, I will barter or trade. . . . Being a drawing of the gesture sign for *trade*, the arms being interchanged in position." Report of the Bureau of Ethnology for 1888-89, p. 603.

‡ Idem pages, 700-701. The Objibwas represented clouds as arcs of a circle—hollow side down—from which descended lines to indicate rain. On a rough rock it would be necessary to draw heavy lines to bring out the idea.

OTHER ROCK PAINTINGS.

Mr. W. J. Morris has frequently informed me of paintings on the shore of another lake still further east than Massanog, and there are said to be traces of some on the shore of the St. Lawrence a short distance below Brockville. Regarding the latter I have been told that it was the custom of some Indians within recent years to visit this place annually for the purpose of renewing the drawings.

Colonel Garrick Mallery, in the volume already quoted from, writes: "Mr. Charles Hallock kindly communicates information concerning pictographs on Nipigon Bay, (*sic*) which is a large lake in the Province of Ontario, 30 miles north-west (*sic*) of Lake Superior, with which it is connected by Nipigon river. He says: 'The pictographs which are principally of men and animals, occupy a zone some 60 feet long and 5 feet broad, about midway of the face of the rock; they are painted in blood-red characters, much darker than the color of the cliff itself.' He also encloses a letter from Mr. Newton Flanagan of the Hudson Bay Company, an extract from which is as follows:

'About the dimensions of the red rock in Nipigon bay, upon which appear the Indian painted characters, as near as I can give you at present, the face of rock fronting the water is about 60 feet, rising to a greater height as it runs inland. The width along the water is something like 900 yards, depth quite a distance inland. The pictures are from 10 to 15 or perhaps 20 feet above the water; the pictures are representations of human figures, Indians in canoes, and of wild animals. They are supposed to have been painted ages ago, by what process or for what reason I am unable to tell you, nor do I know how the paint is made indelible.

As far as I can gather, the Indians here have no traditions in regard to these paintings, which I understand occur in several places throughout the country, and none of the Indians hereabouts nowadays practice any such painting."

Owing to the evident confusion in these paragraphs, of Nipigon Lake and Nipigon Bay, it is impossible to learn from the statements where the rock-paintings are, but assuming that the Hudson Bay Company's officer was not likely to make any mistake in naming the Bay as the place, I wrote to Mr. Peter McKellar, of Fort William, for further information, as there are few men better acquainted than he is with all the local features in that part of the province. His reply is to the effect that he is unaware of anything of the kind existing on Nipigon Bay. This, however, is not conclusive, but meanwhile we cannot decide where to locate the paintings referred to.

Still further west, Mr. A. C. Lawson, formerly of the Geological Survey of Canada, has described an instance of rock-carving as well as one of painting in the Lake-of-the-Woods. The former occurs on the south side of an island in the northern part of the lake. Mr. Lawson comparing the inscription marks with the glacial grooves on the same rocks concludes that considerable antiquity must be ascribed to the carvings. On another island known to the Indians as Ka-ka-ki-wa-bic-min-nis he found inscriptions painted in ochre.

As there are doubtless examples of rock-painting, and rock-carving hitherto unreported the writer will feel obliged for such information as may enable him to make a list of these occurrences. Detailed accounts, accompanied by photographs if possible, are especially desirable. Where carvings exist perhaps the best way to get exact copies is by means of what is called a 'squeeze,' that is to say, a sheet of thoroughly damp, coarse brown paper, is spread over the surface to be copied, and there held accurately in place, while with a brush (a good shoe brush will do) the paper is gently beaten until it is certain that every portion of it conforms to the face of the stone. Should "breaks" appear in the paper, they may be covered with patches and similarly treated. Two or three damp sheets may be added in succession, with or without paste (preferably with paste when convenient). Let this remain on the rock until it becomes dry. No attempt should be made to roll the sheets into small compass unless the markings are very coarse. If it prove needful to reduce the size, cut the sheet irregularly as best to suit the markings, and there will not be any difficulty in arranging the pieces afterwards.

If the work to be copied be a painting, careful drawings should be made when photographing is impossible, and query marks should be placed where the outline is obscure, or otherwise doubtful. In such cases no two copyists would be likely to agree, and it is in every way better to say that so-and-so is not clear, than to imply that the copy is accurate. Dimensions of the figures should be taken in such a manner that they will assist when the first drawings are being more carefully copied for the engraver.

Lot, concession and township should be recorded, and as many topographical details as possible should be noted, with everything that can be gathered relative to Indian occupation, date of settlement, and the first observance of the paintings.

As no possible good result can follow the obliteration or destruction of such paintings and carvings as are here referred to, those persons on whose property they exist should do everything possible to preserve the aboriginal records. The feelings of a common humanity alone should dictate this course, aside wholly from the interest that work of the kind possesses, not for the student only, but for everyone who cares to cast a thought over the course travelled by his race, if not on this continent, on some other one; for those who have gone fastest and farthest, did so by similar stages in the earlier part of their journey.

LANARK COUNTY.

The number of specimens from this county having been considerably increased during 1895, it is possible to mention at least two features that characterize them as a whole. One of these is the disproportionately large number of poorly finished celts or hatchets. Not more than three per cent. of these tools possess the finish that marks implements of the same kind found in the counties that lie between lakes Erie and Huron, although they are but little inferior to specimens found in the immediate vicinity of Toronto, and in the old "Huron country." Most of the eastern celts had no more work expended on them than was barely necessary to make them serve their purpose. A good cutting edge was produced, and beyond this no trouble was taken to bring the tool into shape, except that the corners were rubbed down a little, and unusually rough spots were subjected to a similar process—this was all. Some were designed for use as axes, and others as adzes, judging from the amount of bevel given to opposite sides of the cutting edge; and a degree of smoothness on the corners of some of them, about half-way between the two ends is suggestive of some binding material having been employed to fasten the tools to handles. It is not unlikely, however, that many of them were held directly in the hand. If employed to remove charred wood, in the course of shaping canoes for example, tools of this kind might have been quite as effectively used in this way as if attached to a handle. A few of those that approach most closely in form to the western type are much weathered, and thus have the appearance of greater age than the rudely made specimens, but their present condition is probably owing to the quality of the stone, a coarse granite, some varieties of which disintegrate rapidly when exposed to the air.

It cannot be said of the rudely formed celts, as is held regarding certain 'flints,' that they are "rejects," or that they are only partly finished. Everything leads to the belief that they were as complete as the makers intended they should be—that, in fact, the toolmaker had no desire to bestow on them any more than barely the amount of labor requisite for the work they had to do, whatever that may have been. In other words, the production of fine axes and adzes was not a fad, or a whim—was not fashionable—among the people who long ago lived in the valley of the Ottawa.

That, at any rate, the lack of symmetry and polish on the celts in question was not due to a deficiency of taste or skill on the part of the workman, is borne out by the unusually large number of well-made 'gouges' produced by the same people. From the limited area in which Dr. Beeman has had to carry on his work, we have received nearly fifty of these stone implements, and many of them exhibit traces of high finish, and several specimens found in an almost perfect condition are marvellously fine results of aboriginal industry. One of these gouges is figured and described elsewhere. (Figure 61.)

Nowhere else in the province have so many tools of this kind been found in proportion to the number of other relics, and perhaps the Lanark district is unique in this respect so far as the whole continent is concerned. Some of these correspond to what may be called the normal type, but the variations are numerous and may be described only with the aid of illustrations. Taken altogether the collection of gouges from this section is remarkable.

The number of slate gorgets is not large, but is sufficient to show a similarity of taste between the people who resided here and those who lived farther south and west. Pipes, either of stone or of clay, are not so numerous as might be expected, but some good specimens of both have been found. Our Lanark collection contains only one "banner-stone," and it is in an unfinished state. One very handsome bird-amulet is all the district has yielded of this type. Flints have been found in considerable numbers, and specimens of quartz weapons occur more frequently than anywhere else in Ontario. Recently, several felsite objects have been found, and considerable interest attaches itself to these, more perhaps on account of their peculiarly palæolithic appearance than because of the unusual selection of this material. A larger number of felsite specimens must be collected before it will be possible or judicious to arrive at conclusions, now barely suggested by those we have. See Figs. 21, 22, 23.

What follows regarding this county has especial reference to the shores of

Lake Rideau.

So much valuable material has been brought together from the shores of this lake during recent years, by Dr. T. W. Beeman and a large number of intelligent coadjutors who have become deeply interested in his work, that the locality is now one of the best represented in the Provincial Archæological Museum. Mrs. McLaren, of Perth, having very kindly placed her yacht, the Geraldine, at my disposal for the purpose of examining what have been extensively occupied localities on the shores of the lake in Leeds, as well as in Lanark, two days were spent in going over the ground.

The water being unusually low last summer, a very large area of land was left dry, for when the water is at its normal level, since the construction of the Rideau Canal, it covers hundreds of acres to a depth of not more than two or three feet. It is mostly on the land thus submerged, or very close to it when the water is high, that the largest number of specimens have been collected.

What has evidently been a populous and long established aboriginal settlement is on Plum Point, a small promontory in North Elmsley. Here the lake is not more than half a mile wide, and the shore is covered with blocks of Potsdam sandstone, from a few inches to several feet in diameter. A little to the east of this the surface is free from stones, but every yard almost, yields evidence of occupation. The soil itself consists largely of ashes to the depth of a foot, and even more in some places, and this condition is said to be apparent at intervals northeastwards as far as the Tay, half a mile distant. The finds made along the shore at and near Plum Point are almost wholly free from signs of European contact, almost the only exception to this being a small triangular ear-drop, or pendant, of what seems to be blue glass of mottled appearance, when held up to the light. It is nearly equilateral, measures five-eighths of an inch on the side, and has a small hole, roughly bored, near one of the angles. A small semi-circular copper blade, three and a half inches in length, three eighths of an inch wide, and provided with a sort of tang at each end, on the same plane as the curve, but at an obtuse angle to it, was picked up by Dr. Beeman on the occasion of our visit.

Fragments of pottery, although not rare by any means, do not occur so frequently as on western village sites. Specimens made from bone are scarcely ever seen. Steatite has been in some request, but less so than might have been expected. Numerous rubbing-stones occur—some slightly hollowed, some deeply furrowed, and others well rounded on the edge. Several excellent spear or lance-heads (if they were not knives) have been found, and "flints" of various sizes, but much alike in shape, are not uncommon. Scrapers sometimes take a form not seen anywhere else. Celts and gouges are often found, the former anything but well-finished, while the latter are mostly characterized by their excellence of form. A few pipes of steatite and clay have been collected, but they are not numerous.

Squaw Point is in South Elmsley, Leeds county, almost directly opposite Plum Point. Here also there has been an extensive settlement. Many specimens have been collected at this place, and several very fine ones were procured by Mrs. McLaren during one of the days of our visit.

Everything that was found on both Points and on Sand Island, a little farther to the north-east, is now in the Museum.

A valuable feature of many specimens from this locality is their unfinished condition, by means of which, in several instances, hints have been afforded relative to working methods.

The amount of material we have from this section of Ontario is now sufficient to enable us to make an intelligent comparison with what is yielded by other places, and it is proposed to make a special study of the specimens from Lanark county in the report for next year.

In another part of this report will be found a list of the year's accessions from Lanark, with the names of those who have so willingly co-operated with Dr. Beeman in bringing together a large quantity of material—material which, if widely scattered and in private hands, would be practically valueless for any scientific purpose.

Unlike many elsewhere, his assistants have given their finds freely, and without the remotest allusion to any mercenary consideration. The only outlay has been in payment of labor on a few occasions when it was desirable to take advantage of low water in Rideau Lake.

FLINTS.

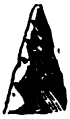


Fig. 2.

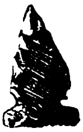


Fig. 3.

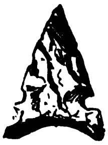


Fig. 4.

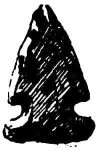


Fig 5.

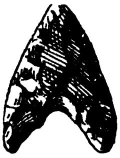


Fig. 6.

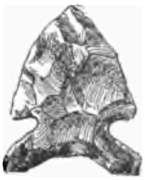


Fig. 7.

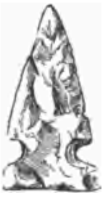


Fig. 8

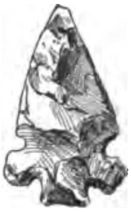


Fig. 9.

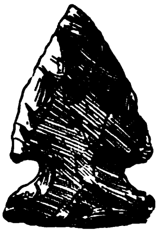


Fig. 10.

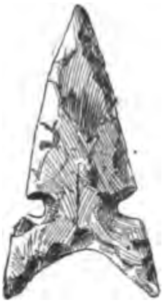


Fig. 11.

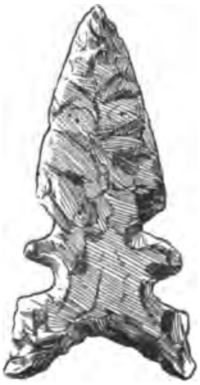


Fig. 12.

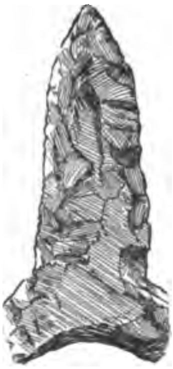


Fig. 13.

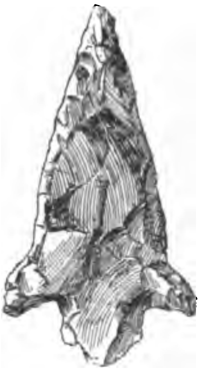


Fig. 14.

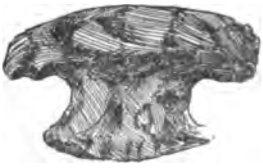


Fig. 17.

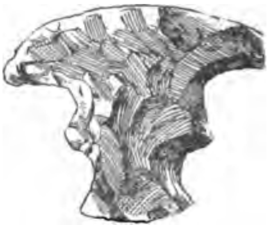


Fig. 18.

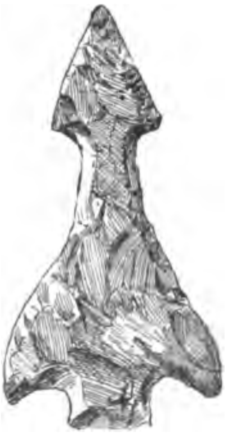


Fig. 15.

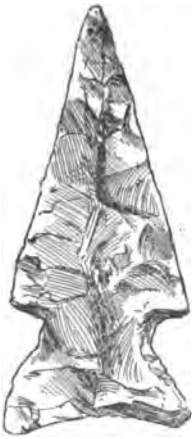
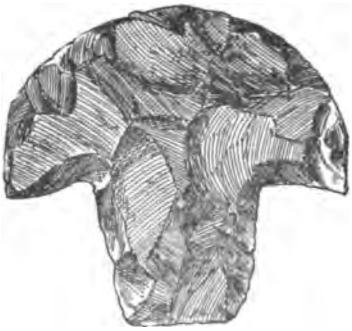


Fig. 16.


(All full size). Fig. 19.

Of late years "Flint Jacks" have been on the increase, on account of the demand by collectors for rare forms of flaked specimens. While the naked eye may readily be deceived by the appearance of weapons that have been altered in form to produce something singular, and, therefore, more marketable, it is comparatively easy, with a lens of even low power, to distinguish where the patination has been destroyed, although it is affirmed that some European fake-flakers have discovered a process by means of which the patina may be artificially and speedily restored. In this country, however, no such attempts have, so far, been reported, although we may expect to hear of them some day.

The specimens here figured are all from the county of Brant—most of them from the township of Tuscarora, where they were collected over a period of many years, by Chief Deh-ka-non-ra-neh, a Mohawk. They are all represented full size, and the originals are in every instance (with some two or three exceptions) made from the chert which has supplied the material for most of our Ontario weapons and tools of the kinds typified.

In point of variety as to outline, these specimens (figures 2 to 19) from near what was in all probability the chief town (Kandoucho) of the Neuters or Attiwandarons, will compare favorably with flaked or chipped objects found in any other part of America. Indeed, should fanciful forms not be discovered in this part of the country, it would be almost needless to search for them anywhere else, for among all the Indians known to have inhabited Ontario at or before the time it was visited by the French trader and missionary, the Neuters, on account of their immunity from invasion, their command of the "flint" supply, and the generally excellent natural resources of their country, led a life of comparative ease. In these circumstances it is not unreasonable to conclude that the natives would employ some of their leisure in devising and working out unusual shapes. It is a fact that "ceremonial" objects of Huronian slate, highly finished, are much more numerous in the Attiwandaron country than anywhere else in this province.

It might be difficult to decide whether the smallest of the arrow-tips here figured were intended for use, and if so, what? or merely as playthings for children. Perhaps most of the specimens illustrated were more for ornament than use. Even a savage would hardly expend much time, skill and labor on that which, if once driven from his bow, he might never see again, or see only to find it ruined. As with the bone specimens we call needles or awls, it is not improbable that fanciful forms of "flints" were employed to fasten the clothing about the body. In this capacity they would also serve as personal adornments. In the absence of a wide range of material, and none of it very rare, the value of Indian jewelery must have depended mainly on form and finish.

The specimens figured with rounded or blunted ends reminds us of "scrapers," and may, indeed, have been used as such.

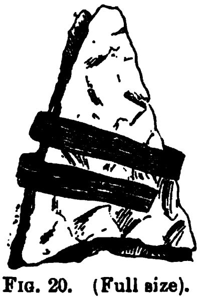


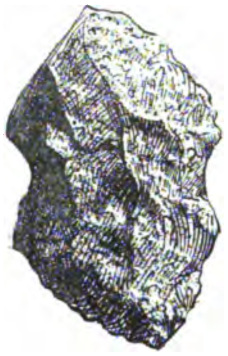
Fig. 20. (Full size).

The only interesting feature connected with the accompanying figure consists in the fact that the two arrow-heads are bound to each other by means of a small strip of copper, apparently of European origin, as there is hardly a doubt that it has been cut from some fragment of an old pot or kettle of this metal.

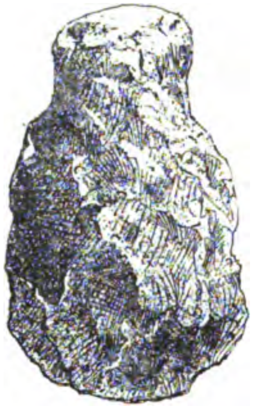
These specimens may be regarded as curiously symbolic of the coming together of the two races.

They were presented to the curator personally, a good many years ago, but the record of the donor and of other particulars has been lost. Should this meet the eye of the gentleman who presented them, he will confer a favor by supplying information relative to the place and circumstances of this interesting little find.

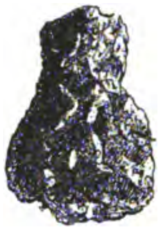
Among the most noticeable specimens added to the Museum during the past year are several of flesh-colored felsite. Figures 21 to 23 may be regarded as representative of the lot, although one of them, not figured, is fully as large as all these together, and some of them present no attempt at being notched. The extreme palœolithic appearance of these " felsites " is so striking as to make one wonder, whether after all America had not a pre-glacial type of man. It is quite out of the question to regard such specimens as " rejects." Extremely rude as they are, there is yet nothing in the nature of the stone to have prevented the ancient workman from bringing them into better shape. Neither are they indicative of unskilfulness on his part. He evidently understood the nature of his material, knew exactly what form he wanted to produce, and did so in no hap-hazard fashion. Figure 21 is a comparatively light, but well balanced celt, three and three-fourth inches long, and two and a fourth inches wide. Each end is sharp —the lower one has been regularly flaked on both sides—but the implement does not appear to have been used.



21—Half dia.



22—Half dia.



23 - Half dia.

Figure 22 is of a different type, and much heavier in proportion to its length, for while it measures in this direction only half an inch more than the former it is an inch and a half in thickness, or three times that of figure 21. The blade is coarsely flaked to a cutting edge all round, but special attention has been paid to making the lip thin and sharp. At the end of a stout handle, as the notches would seem to have been intended to hold, this would prove a very effective weapon at close quarters.

Figure 23 not unlike the former in side outline is very thin. Its dimensions are two and five-sixteenth inches long, one and five-eighth inches wide, with an average thickness of less than half an inch. The material is of a deeper color, almost like red hematite, and is of finer grain as shown by the result of the chipping.

SLATE TOOLS.

It is not always the most beautiful, or most highly finished object that possesses the greatest attraction for the archæologist. The specimen here figured is absolutely unlovely, and yet it is a really marvellous example of aboriginal skill in the manipulation of stone. It is a piece of Huroni-

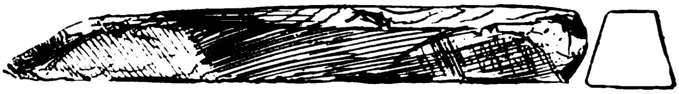


Fig. 24.

an slate almost thirteen inches and a half long, three sides of which have been sawn into tolerably plane surfaces, while a good beginning has been made on the fourth. The intention seems to have been to form this into a chisel of some sort—perhaps what is occasionally referred to as an "ice chisel" several specimens of which are in the Museum. Whatever the purpose was, the work has been performed in accordance with a well designed plan, for while two opposite sides are nearly parallel, a third one is made with a slight outward curve, to which it was obviously the intention that the opposite and still incompletely worked side should correspond. This extremely interesting and instructive specimen was found near Lombardy, Township of South Elmsley, Leeds County, by Mr. Nelson Covell, by whom it is presented.

The specimen of which a figure is here shown is simply a slate pebble, four and a half inches in length, an inch and a half wide, and three-fourths of an inch thick, on which there is no evidence of work to bring it into shape, but which is deeply worn on both edges, and is considerably battered at the ends. The worn portion is too deep to be the result of wear in connection with attachment to a handle for hammer purposes, because the tool is so light. The hollowed portion on each edge is sharply shouldered towards opposite ends and at a slight angle, and its general appearance suggests that the stone was held between the operator's two hands and worked backwards and forwards along some cord or thong that surrounded it, the purpose probably being to smooth, stretch, or render supple the sinew or fibre so operated upon. The battering on the ends may be the result of blows that were occasionally struck in connection with some other part of the work.

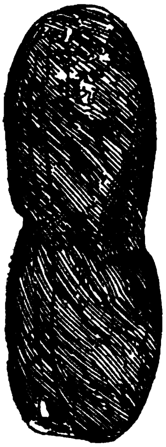


Fig. 25.

The tool referred to was picked up on Lake Erie shore, in Elgin County.

Figure 26 shows the proportions of what is the largest, if not the heaviest stone implement in the Museum. It has been suggested that the use of it was to break ice on the surface of springs or streams, but this is wholly supposititious, as any common hatchet or heavy flint would answer this purpose, and it is therefore, not likely that a special form of tool would be made to accomplish it, especially a tool on which so much labor had been expended. It is probable that at least an inch has been broken off one end, but even in its injured state it measures fifteen inches in length. At one time it seems to have been the intention of the workman to cut this piece of stone along lines different from those latterly followed, and the shallow-pecked "scribing" may yet be seen almost continuously from end to end. From North Yarmouth township, Elgin county.

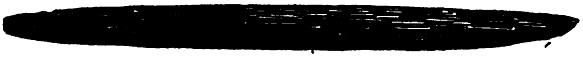


Fig. 26.

A WELL WORN ADZE.

Not one in a hundred of the plain celts, or hatchets, or of the adzes shows any sign that it even was attached to a handle. The adze (six and a quarter inches long) represented by figure 27 is an exception. On what has originally been the flat face of this tool the abrasion of thongs used to fasten the handle has not only worn the corners deeply, but has reduced by three-sixteenths of an inch the whole body of the stone.

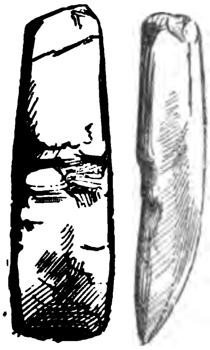


Fig. 27.

It is noticeable, however, that the wear has been almost wholly effected on the flat side of the tool, as if the rounded side had been in contact with the handle, and the thongs therefore, binding the two by passing round the former side, just the opposite of what the form of such tools would suggest, but this one may have been employed in some exceptional way. In any event it must have seen many years of service to be in its present condition.

The stone appears to be a very fine grained syenite, capable of taking and keeping a good edge. The adze is from the Brandon farm, near Talbotville in Elgin County—not far from the celebrated earthwork in Southwold.

CLAY PIPES.

Figure 28 represents an exceedingly remarkable form of clay pipe. The two chambers of the bowl open into each other immediately below the point of junction, so that one stem hole was sufficient to communicate with both. The workmanship on this pipe is not of the highest quality—there is no attempt at ornamentation and the twin portions of the head are neither round, nor oval, obviously the result of awkwardness in manipulation. This specimen is one of several found in the township of Harvey, Peterborough county, by Mr. Jas. Cairnduff, of Bobcaygeon, and kindly presented to the Museum by him.

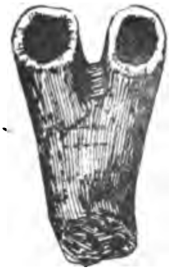


Fig. 28. (Half. dia.)

Figure 29 represents a very well executed human face on the bowl of a clay pipe. Although the features are strongly marked, they are not distinctively Indian. The ears are pierced. The eyes have been carefully moulded to give expression—a less successful attempt has been made to form lips, but the chin and cheeks are fairly well modelled. As in most cases the face looks along the stem. Found in Harvey township Peterborough county and presented by Mr. Jas. Cairnduff.

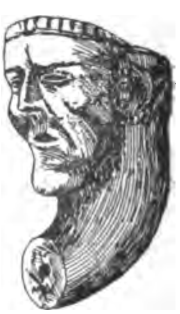


Fig. 29. (Half dia.)

Figure 30. This ornament from the head of a pipe bears some resemblance to Indian physiognomy, but the specimen men is chiefly interesting on account of the way in which the hair is arranged. This fragment is only an inch and a half in length. Mr. James Cairnduff, Harvey township, Peterborough county.

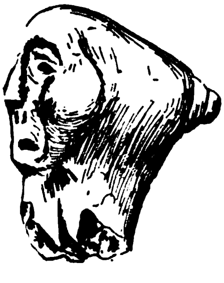


Fig. 30.

In these figures (31 and 32) we have represented a pipe-stem of very singular shape and style of ornamentation. The two sides are wholly unlike in design, and on the one bearing the diagonal pattern the markings though deep are much less so than those on the opposite side, where at the deepest parts they are nearly one-fourth of an inch below the surface. Along each edge also, there is a deep groove. Short as this stem is, it was meant to be held immediately in the mouth, as it is much reduced in size at the end, and the hole is too small for the insertion of anything larger than a quill. This most unusual form was found in Harvey township, Peterborough county, by Mr. James Cairnduff.

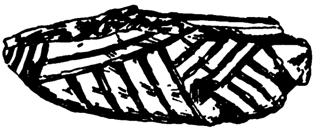


Fig. 31. (Half dia.)

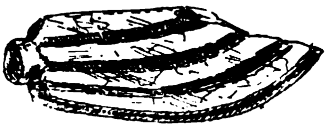


Fig. 32. (Half dia.)

Perhaps the Indian allowed his fancy or his whim to play more freely in pipe-making than in any other branch of industry. While it is true that certain types prevailed in given localities, individual pipe-makers evinced considerable originality in the forms they produced. If economy of space for convenience in carrying was the object of him who made the specimen illustrated by figure 33, he could scarcely have produced anything more compact, as the stem in all probability was not more than an inch in length, which would have made the total length two inches, or just the same as the height, while at the mouth of the bowl it measures an inch and a quarter from front to back, and is only five-eighths of an inch wide. Edgewise, the bowl narrows rapidly inside, from a little over an inch to about three-eighths of an inch in its longer diameter, so that the charge of tobacco or other smoking material could not have been a very heavy one. This pipe was found on lot seventeen, concession two, township of Malahide, by Mr. George C. Peacock.

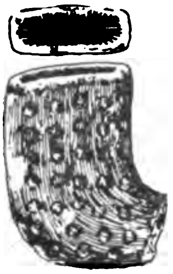


Fig. 33. (Half dia.)

Figure 34 represents an almost perfect specimen of clay pipe, small in size, and correct in outline. It appears to have been better burnt than is usual, and looks as if it had undergone long usage. The bowl is an inch and three-fourths in height, and the stem is two and a quarter inches long—both measured from the outer angle.

It was presented to the Museum by Master Garnet Page, who found it on his father's farm, lot thirty-two, south half of broken front, Bertie township, county of Welland.

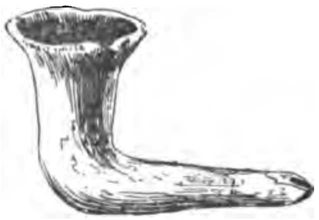


Fig. 34.

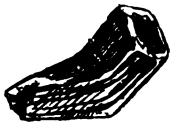


Fig. 35. (Half dia.)

This little clay pipe presents a few pecularities. Both stem and head are square, or were intended to be so; the walls of the bowl are unusually thin, and the ornamental pattern is of a kind seldom seen. It was found in Elgin county, and procured from Dr. Tweedale, jr.

The exceedingly diminutive pipe shown here half diameter, was found at the "Fort" on the farm of Mr. R. Shaw Wood, lot 20, con 4, London township. It is not a fine piece of work at all, and may have been made by a child, or for the use of one. This, with numerous other specimens was procured from Mr. Wm. Mathe-

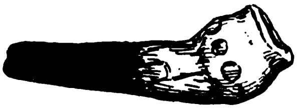


Fig. 36. (Two-thirds dia.)

son, one of Ontario's most indefatigable collectors, and to whom the county of Middlesex especially owes much for the pains he has taken to bring together hundreds of valuable specimens, which but for him, would probably have been lost.

STONE PIPES.

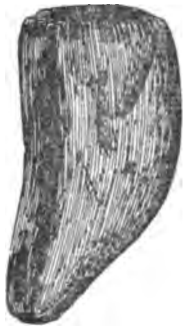


Fig. 37. (Full size.)

Figure 37 shows a neat little pipe (an inch and a half long) of soapstone found on lot twenty-seven, concession C, Scarborough township, York county. It is a deep black, and highly polished. The margin of the bowl is surrounded by a row of neatly cut lines, perhaps for embellishment, but the apparently intentional breaks in the series suggest that a reckoning of some kind may have been made here. This with other specimens was presented by Mr. Robert Martin of Scarboro', who found them.

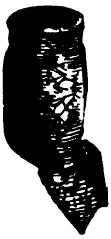


Fig. 38. (Half dia.)

The pipe figured here when in a perfect state must have been of elegant form. It is remarkably well made showing few traces of tool-marks. It is made of rich, dark amber-colored soapstone, and was found by Mr. Samuel Wilson, on lot 22, concession 5, Bathurst township, Lanark county. Mr. Wilson presents it through Dr. T. W. Beeman.

Figure 39 is a peculiar specimen of pipe on account of the triangular transverse section presented by its stem, and from the fact that a bead has been neatly carved to offset each angle. Two of these beads extend nearly to the margin of the bowl, but the one on the base of the stem terminates just where the head begins. This pipe is made of gray soapstone. It was found in Harvey township, county of Peterborough, by Mr. James Cairnduff.

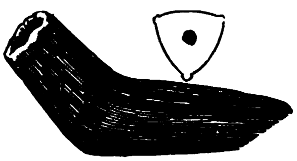


Fig. 39. (Half dia.)

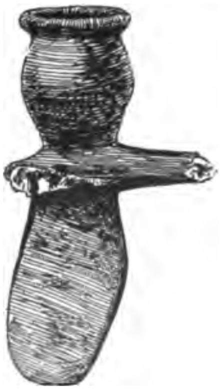


Fig. 40. (Half dia.)

The soapstone pipe figured in this cut is remarkable for the long, flat tail or projection underneath the bowl. The total height of the pipe is three and three-fourth inches, the projection alone measuring two inches. This lower part is three-eighths of an inch thick where it unites with the base of the bowl, but it is only half that thickness at the end. The stem is a flattened oval (like that shown in figure 38), seven-eighths of an inch wide. It was probably longer at one time, as the end appears rough, or only rubbed down enough to remove angles.

This singular specimen was found by Mr. Alexander Parks, of Eganville, on the bank of the river Tay, South Sherbrooke township, Lanark county.

A stone pipe of rare form is shown at fig. 41. Measured lengthwise, *i.e.*, from the lip of the bowl downwards it is one inch and seven-eighths, and is within an eighth of an inch of being as wide. In cross section it presents three angles united by rounded sides, as shown in the cut. The bowl-hole is five-eights of an inch in diameter at the lip, but

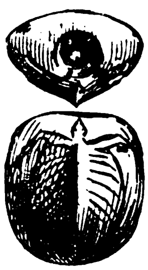


Fig. 41. (Half dia.)

diminishes to less than half of that at the bottom, an inch and a quarter-deep. The stem-hole which enters from the widest side is half-an-inch in diameter, but narrows rapidly to nearly an eighth where it meets the one forming the bowl. On the other two sides a turtle is rudely carved. This pipe was found in South Yarmouth township, Elgin county.

The unfinished pipe illustrated by figure 42 was found in a field near the Brant House, not far from the lake shore, in Nelson township, county of Halton. It is of a type not uncommon in Ohio, and known as platform, or monitor pipes, the latter name having been given to them from their resemblance to the turret warship "Monitor." The material of this pipe is exceedingly hard—probably quartzite, and the amount of labor expended to bring it to its present shape must have been extraordinary. Only a little polishing has been done, and the marks of pecking are still visible over most of the surface. Boring to form the hole has been begun, but the cavity formed is less than three-eights of an inch deep, and scarcely half an inch in diameter. The work of boring appears to have been performed by means of wood and sand, for not only is the bottom of the hole nicely rounded, but the entire surface is free from the striæ left by stone drills. Indeed, it would be impossible to perforate this material with a chert instrument, itself no harder. A wooden drill, therefore, revolved by means of a bow, and aided by sand and water would seem to have been the only method by which it was possible to make a hole in this stone. No doubt the proceess must have been an exceedingly slow one, but patience on the part of the workman would enable him in the course of months, or of years—perhaps of nearly a life-time, to complete his work. As the diameter of the intended bowl averages an inch and three quarters while that of the hole is less than half an inch, it was probably the intention to widen the boring by other means after the completion of the drilling, or, it may have been that allowance was made for a certain amount of necessary enlargement near the margin, as the hole deepened. This, however, would be less likely where a wooden spindle was employed than if a stone drill of any kind had been used. At one end of the projecting base, the merest beginning of a stem-hole may be seen. In this instance the shorter and thicker end has been chosen for the stem, whereas in most pipes of this kind the longer end has been selected.

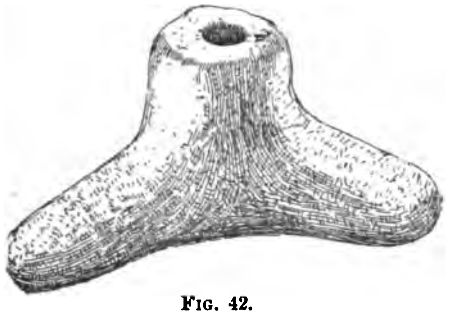


FIG. 42.

The length of this fine specimen along the base is five inches, and the height is three and a quarter inches.

It was found by Master Richard Lewis, son of Mr. John Lewis, of the Toronto *Globe*, and was kindly presented by him to the Museum.

Since the foregoing was written it has occurred to me as not improbable that while the ultimate purpose of such a specimen as Fig. 42 was no doubt that of a pipe, it may have been employed primarily as a head-piece when using the bow-drill. Something hard must have formed a seat for the head of the drill shaft, and such seat must have become, in course of time, deeply pitted. It is not beyond what we know of Indian skill and ingenuity, to suppose that the ancient workman was intelligent enough to take advantage of the consequent wear, to assist him in producing the largest cavity for a pipe in a stone so hard as quartz, while at the same time he could not have found anything better adapted for a head-piece when using his drill. As in the case of other surmises this may be very wide of the mark, but the appearance of the hole rather lends color to the thought, and the base of the specimen is admirably adapted to fit against the brow, or, indeed, to be pressed by any part of the body in connection with the employment of a drill, whether worked by one person, or by two, for the latter method was, no doubt, sometimes found necessary.

PENDANTS.

This pendant-like specimen is from the farm of Mr. F. Crone, Arkona. It is a gray slate, unstriped, and measures an inch and three-fourths across its two longer diameters, being an inch in thickness below, and three-eighths of an inch thick at the top. The evidences or appearances of wear are but slight, and are on what would be the lower rather than the upper side of the hole if the article had been worn as a drop, or pendant. The irregularity of form is unaccountable, as articles of this material are usually marked by considerable care to produce correspondence in all their parts. As may be seen from the cut, one edge is broad—three-eighths of an inch—while the opposite edge is scarcely a third of that, and while the corner at the base of the latter edge is comparatively well-defined, that on the opposite side is rounded. Perhaps the specimen was left in an unfinished condition.

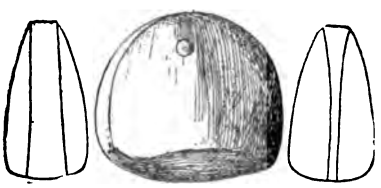


FIG. 43.

The specimen represented here (one and three-eighth inches long) is an accurate piece of work, all things considered. It is more nearly exact in its sides and angles than most men, not lapidaries, would produce with the aid of good tools. The stone is Huronian slate, and not difficult to work, and yet one cannot help being struck with the nicety that characterizes Fig. 44. All the corners are delicately rounded, and the polish is probably as high as it is in the nature of the stone to take. The holes have been carefully bored—not mathematically in the centre of each side, but very nearly so—and the drills have left as clean pieces of work as if they had been part of the best machinery. In each case the perforation has been made from one side only—at any rate there is nothing to indicate the reverse—and the longer one is wider by half at the lower than at the upper end, where it measures only an eighth of an inch in diameter. This specimen was procured from Chief Dch-ka-non-ra-neh, of the Tuscarora reserve, Brant county.

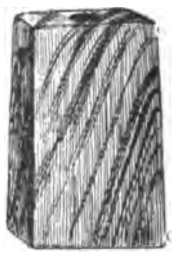


FIG. 44.

Was this an ear ornament? It is two and five-eighth inches in length, and a quarter of an inch thick. The broad end is brought to an edge from each side, and the point is fairly-well rounded. Similar specimens have been found at wide intervals throughout the province, but this is the only one sharpened at the wide end.

Found on Mr. Shaw Wood's farm, lot 20, con. 4, London township.

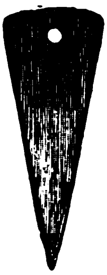


FIG. 45.

GORGETS—AMULETS, OR TALISMANS (?).

The arrangement, or want of arrangement of holes in those specimens we have agreed to call gorgets, or tablets, is always puzzling. When a gorget has only one hole, it may be

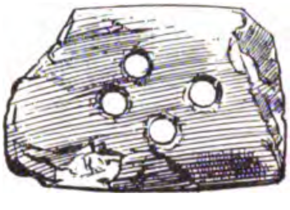


FIG. 46.

near the end (generally the smaller end when there is any difference), in the centre or anywhere else between these two points — having two, the position is equally uncertain, except that as a usual thing they are bored in line with the longer axis of the specimen, but when the number exceeds two, even this regularity is lost sight of Fig. 46, from the Lake Erie shore, in South Yarmouth township, illustrates how four holes have been made in a specimen, now fragmentary. Nothing in the appearance of the holes indicates wear by suspension—on the contrary, the original drill marks are, in each case, quite visible.

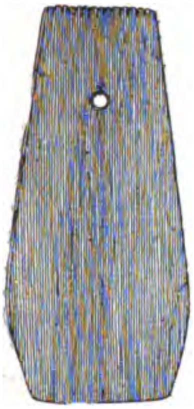


FIG. 47.

The brown slate tablet illustrated by Fig. 47, is four and one-eighth inches in length, one and three-fourth inches across the widest portion and three-sixteenths of an inch in thickness In every particular the workmanship is good. The form is not only almost symmetrical, and the finish excellent, but the whole, which shows signs of considerable wear, is unusually well bored. The twelve notches at the top were no doubt intended merely for ornamental purposes. Found on the surface by Mr. Daniel Dewer, lot 11, concession 13, township of Lobo, Middlesex county.

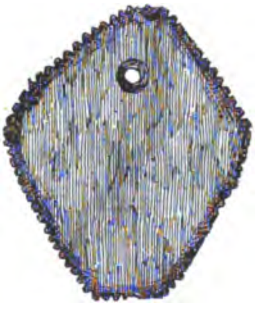


Fig. 48.

The specimen figured here reminds one of the "hummers" that boys sometimes amuse themselves with much to the terror of their mothers and older sisters, who declare that "they will fly off the string some day and break something, or hurt somebody." But attempts made to produce a hum with this specimen have not been successful. The smoothness of the upper side of the hole indicates possible use as a pendent adornment of some kind, and the notches that surround the specimen are no doubt so placed by way of ornamentation. They are certainly not tally-marks. The stone is dark brown slate, three inches long, two inches wide, and one-fourth of an inch in thickness, the edges being ground down to about an eighth of an inch. It was found by Mr. Thomas Randall on lot 21, concession 18, broken front, West Williams.

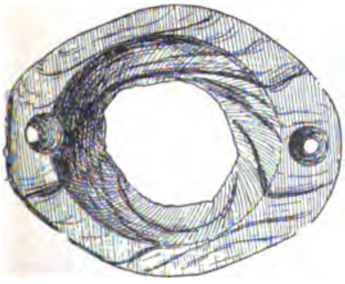


Fig. 49.

Figure 49 represents a unique form, so far at least as Ontario is concerned. It is of the material (Huronian slate) which was so much in demand for what we call ceremonial objects. As is the case with some other specimens referred to in this report, the one here figured is in an unfinished state. It is three and three-eighth inches long, and two and three-fourth inches wide, and varies in thickness from half an inch at one end to little more than a quarter of an inch at the other. The under side is rough and uneven, although some rubbing has been done to remove the inequalities. The large, central hole is from an inch and a quarter to an inch and a half in diameter, and is quite rough on the edge, which is very thin on account of the countersunk cavity worked round it on the upper, or nearly completed side. From this side also the end holes have been chiefly bored, and they, too, have the countersunk appearance. This odd specimen was found on the farm of Mr. R. Shaw Wood, near London, Ont.

BIRD AMULETS.

"Bird amulets" have been more than once referred to in these reports, but figure 50 represents one which is unusually squat, and shows the difficulty that must have been experienced by the workman in perforating the ever present "fore and aft" holes in the base. The greatest thickness of the specimen at the breast is only five-eighths of an inch, but the holes are there fully a fourth of an inch in diameter on the outside. The length of this amulet, which came from Chubb's farm, Malahide township, Elgin county, is four inches, and it is almost an inch and three quarters across the widest part.

Fig. 50.

The bird-amulet, of which this is a cut, presents a few uncommon features. In the first place it is disproportionately long and slender, measuring from head to tail almost seven inches and a half, the greatest thickness on the base being only half an inch. The base too, is well rounded transversely, and a little so, lengthwise, so that it can be made to stand only with some care. Then, the head is destitute of the projecting eyes, which in an exaggerated form, characterize many objects of this kind. and more than the usual amount of work has been expended on the tail, which forms a flange on each side of the body, and lastly, all the angles except those along the base are relieved with shallow notches. From Tuscarora township, Brant county, Ontario.

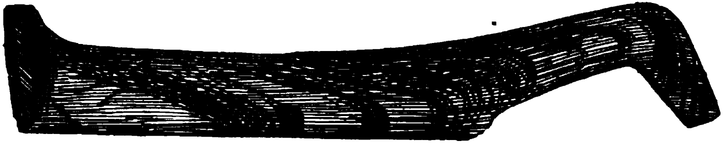


Fig. 51.

In most respects this specimen is the opposite of figure 51. It is only three and three-eighth inches long, but it is five-eighths of an inch across the base The head is provided with enormous eyes, the tail is a simple prolongation of the body; there are no markings along any of the edges or angles, and the base, although a little convex from side to side is slightly concave from end to end.

This specimen was also found in Brant county.

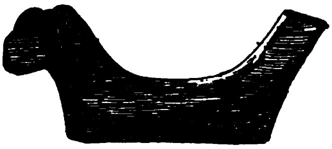


Fig. 52.

It is perhaps unnecessary to state that the three objects here figured are made of striped slate.

BANNER STONES. (?)

This specimen figured here is less finely finished than are most objects of its class. It is also destitute of the terminal knobs shown on two others in a former report. The hole, half an inch in diameter, and not exactly midway, from the ends, is almost perfectly smooth. As there would not seem to be any reason for polishing the hole intentionally, the inference is that this smoothness is the result of usage. The material is slate, one might almost say 'as usual,' but the veining is not so distinct as on many pieces. This 'banner-stone' or whatever it may have been, measures five and three-fourth

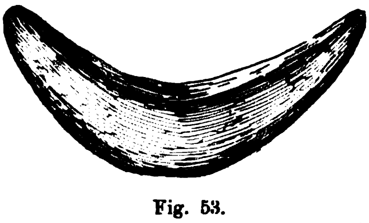


Fig. 53.

inches from tip to tip, straight across. It was found in the city of St. Thomas, four feet below the surface, and came into our possession from Dr. Tweedale, jr., along with numerous other specimens.

Instructive as are all unfinished specimens, they are peculiarly so when they possess traces of the various steps taken to bring them into form. Figure 54 is an especially good example of this kind. Although the workmanship is unmistakeably that of a tyro, he no doubt followed traditional methods closely. Here we have the roughly blocked-out, and partly rubbed down material, but the work has been so wretchedly done that no amount of further labor could make it a first-class "banner-stone." The marks of the pecking process to reduce the size of the boss are quite fresh-looking, one notch has been cut down fully half way, and the second one has been marked out. In numerous specimens belonging to our collection the sides of the notches are slightly hollowed lengthwise, as if the hole had first been put through, and the cutting down had not removed all traces of the boring, but in this case the operation was reversed. The specimen is from lot 16, concession 6, township of McGillivray, Middlesex county, where it was found by the owner of the farm, Mr. Caleb Dowker.

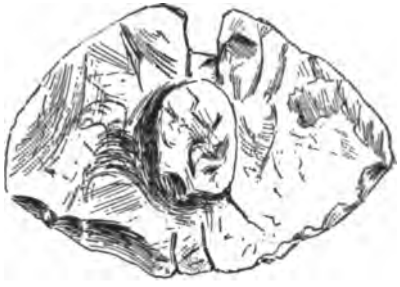


Fig. 54.

WOMEN'S KNIVES.

This cut represents an excellent specimen of the woman's knife. As in most cases, it is of slate. It measures six inches in length, and at its widest part is an inch and a quarter. In accordance with custom the neck is notched, and the notches are so worn as to indicate long usage of the tool, which is of elegant form, and in every particular very well made. The central portion of the blade on both sides is flat and each edge is formed by a slightly rounded bevel extending from it. This specimen is part of the extensive collection made by Dr. T. W. Beeman, who procured it from Mr. James Peters, of Brooke, in the township of Bathurst, Lanark county.

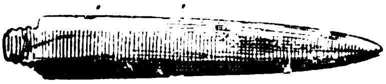


Fig. 55.

Figure 56 is suggestive of European influence, on account of its resemblance to the well known bowie knife, and yet there is no reason why the original shape of the stone should not have supplied a hint as to the handle. In all probability this was a "woman's knife," many forms of which existed. It is of argillite, ten and a half inches long, and disproportionately thick, the back being nearly an inch across at th handle, tapering to three-eighths of an inch at the point. The blade, which has a slight curve sidewise about three inches and a half from the point, is brought to an edge only an inch or so nearer the handle, thus making the working portion of the tool four and a half inches in length. The handle—three inches long—is roughly quadrangular, the corners being rounded off. A groove extending round the end of the handle and along both sides into the blade is probably the result of weathering before the stone caught the aboriginal cutler's eye. The whole of the workmanship on this specimen is very rude. Lanark county.

Fig. 56.

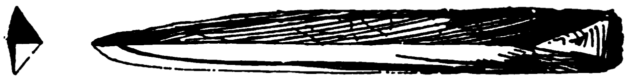


Fig. 57.

Of very unusual form is the tool represented by figure 57. It is nearly eight inches long, and at the widest part measures an inch and an eighth, its greatest thickness not exceeding half an inch. In cross-section it is almost triangular, what may be called the base of the triangle being formed by two planes at an exceedingly obtuse angle which disappears at each end of the tool by becoming slightly rounded, on account of the rubbing or grinding which has been done to make a chisel edge at one extremity and to bring the material (Huronian slate), to a point at the other. Although this specimen has been somewhat injured, it is sufficiently perfect to exemplify the correctness of the savage workman's eye, for it would not be easy even with modern appliances, to produce anything in stone, more accurate in outline. The smaller end has lost probably a quarter of an inch, but the condition of the angles close to the fracture leaves no doubt that here the tool terminated in a point. The chisel end does not appear to have ever been brought to a fine edge as it now presents a perfectly flat, though thin, face, not at all having the appearance of dullness as the result of wear.

It is difficult to conceive of the use to which a tool of this kind could have been applied, unless in the preparation or dressing of skins, as were other forms of women's knives.

The material is altogether too fragile for being brought into contact with wood or bone. It is far more likely to have been employed as a skinning blade, than are the numerous celts or hatchets popularly so regarded.

Whatever its purpose may have been, it is one of the best specimens in the Museum, of aboriginal skill in the production of a symmetrical form. It was found on lot 16, concession 7, township of Bathurst, Lanark county, by Mr. Edward Macdonald, who presented it to the Museum.

TUBES OF STONE.

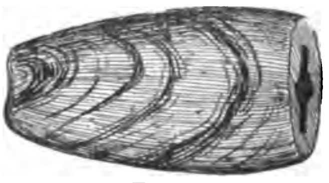


Fig 58.

The use of stone tubes is a matter of conjecture, and references to the various theories entertained regarding them have been made in former reports. The specimen here figured differs somewhat from all the other objects of this kind now in the Museum. The material is similar to that of the others (Huronian slate), but it varies from them all both in shape and in the character of the hole. Throughout the greater part of its length it is, in cross-section, a fairly symmetrical oval with a nearly uniform shorter diameter of seven-eighths of an inch, but decreasing in its longer diameter from an inch and a half at one end to three-fourths of an inch at the other, which is almost circular. The hole, which has been badly bored, is seven-sixteenths of an inch in diameter at the smaller end of the tube, and at the large end it is extremely interesting to have so good an illustration of the method adopted by the workmen to enlarge the size of perforation, and make it conform to the exterior outline of the object. This he has proceeded to do by sawing slots in the sides of the aperture, but something has occurred to interrupt the work which we have here in its incomplete state. The enlarging of a circular hole at one end of a tube (as we find in many cases) was a comparatively easy task—most of the work could be performed by means of drills, corresponding to our rimmers, more widely flaring than those with which the boring had been done, but in this case such an operation was impossible except to a very limited extent, and thus we have a fine example of the ancient Attiwandaron craftsman's skill, as it was found by Mr. W. W. Delaney on lot 14, concession 6, in McGillivray township, Middlesex county.

It may be added that in all probability the oval form given to this unfinished tube was simply the one that occurred to the workman as requiring the least expenditure of labor to bring his piece of slate into regular shape.

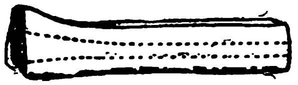


Fig. 59.

Figure 59 is the only one of its kind in the Museum. The material is of exceedingly fine-grained limestone. It is two and three-fourth inches long and three-fourths of an inch high at the end as seen in the cut. Although somewhat rough-looking at the small end it does not appear to be a fragment of any larger specimen, but looks rather as if the work had not been quite completed. If broken at all, a slightly upward turn on the upper side of the fractured end is suggestive of another flare similar to the one seen in the illustration. The hole at the large or flared end is three-eighths of an inch in diameter, and narrows at a depth of one inch, to nearly three-sixteenths of an inch as it appears at the opposite extremity. The use of such a specimen is not known. It was picked up as a surface find by Mr. Wm. Hodgson on lot 12, concession 4, in the township of McGillivray, Middlesex County.

SMALL, HANDLE-HOLED HAMMER.

It is very exceptional to find any Indian tool bored to receive a handle. This fact has been referred to more than once in former reports, one of which contained an illustration and description of a hammer-stone (presented by Dr. T. W. Beeman) that had, to all appearances, been fitted in this way for a haft. The small tool shown here exhibits on its blunted ends the clearest of evidence that it has been used as a hammer, and the hole looks as if it had been filled with a handle, the sharp edges being broken apparently by pressure from within. Still it is not unlikely that the specimen had been so degraded from a former so-called ceremonial-stone, by some one in comparatively recent time, for whom the original form had lost all its significance, whatever that may have been. Slate is not good material for a hammer, and this tool was at any rate, too small to be of much use otherwise than for work that any suitable stone would accomplish quite as well when held directly in the hand. It was found on the Tuscarora reserve, Brant county. Perhaps it is scarcely necessary to say that such specimens have no necessary connection with Indians living on reserves to-day. Tuscarora township is in what was part of the old Attiwandaron country.

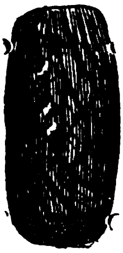


Fig. 60.

GOUGES.

Of the fifty gouges collected by our friends in the county of Lanark. —a locality in which a larger proportion of these tools is found than anywhere else in the province—the specimen figured above is the finest in every respect, and the best in our collection. It is of beautiful rich brown, or dark red argillite; eight inches and a quarter long, and an inch and five-eighths wide at the lip, all the sides tapering with gentle and regular curves to the smaller end, which, as is often the case, is left in the rough, except that the highest angularities have been rubbed down. The groove in no wise diminishes the general excellence of the work. The lip is slightly damaged, either as the result, of usage or of accident. It should be mentioned that the corners are chamfered much more heavily on the under than on the upper side.

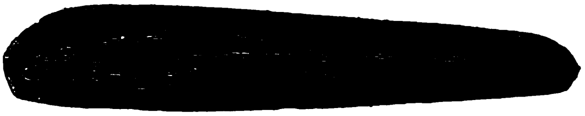


FIG. 61.

Figure 62 illustrating another gouge from the same locality, is the shortest, although not otherwise the smallest, in the Museum. This specimen is only two and three-fourth inches long but is disproportionately wide—an inch and a half at the lip. The head is rough, but not at all battered. This, coupled with the smallness of the specimen, disproves its use for "tapping" purposes, as is popularly supposed. It was found by Mr. George Hone, at Squaw Point, Lake Rideau, Lanark county.

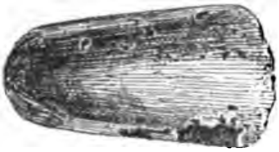


FIG. 62.

NEW FORM OF STONE RELIC.

Figure 63 is in every respect unique. At first it would appear to have been almost cubical, averaging about an inch and a half on each side; the upper surface, or that from which the holes have been bored, being somewhat more oblong than the opposite one. The fractured edge and the general appearance of the specimen are highly suggestive of actinolite, as it occurs in the township of Grimsthorpe, county of Hastings. A hole fully an inch and a half in diameter, has been bored to a depth of an inch and a quarter, but a quarter of an inch from the upper side it has been scooped out until it attains a width of nearly an inch. The edge of this hole is smoothly rounded. From each corner, and at an angle pointing to the centre of the base of the large hole, another one, a quarter of an inch in diameter, has been bored. Only two of these remain intact, but a portion of a third one remains, and the inference is that another penetrated from the fourth corner. It is chiefly in connection with these small holes that the oblong form of the upper side is observable, for while the distance between the two uninjured holes is less than five-eights of an inch, that between one of these and its opposite on the fractured edge is an inch. Half an inch below, and parallel with, the upper surface, a deep notch has extended the full length of the two longer sides, and the corners have been chamfered from above to meet the notches. What remains of the bottom is perfectly plain, but all the other sides bear series of zig-zag or herring-bone markings forming rude

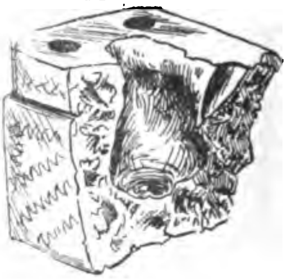


Fig. 63.

patterns without any apparent regard to regularity. Portions of the fractured edge present distinct appearances, that of the longer side being much discolored as if by the action of fire, while the remaining part is comparatively fresh, except along the line of the hole, where it also looks as if it had been subjected to considerable heat. Perhaps after all, this specimen is only a whimsical form of pipe-head, the stem-hole having entered from the missing side. In any event, the object is remarkable both on account of its form and the material from which it has been fashioned.

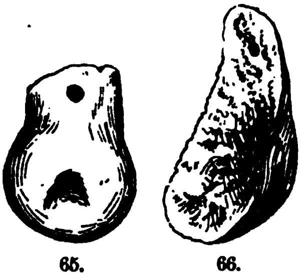
It was found near the village of Washington, in North Brant, by Mr. Frank Wintemberg, who kindly presented it with other specimens to the Provincial Museum.

PERFORATED BONE AWL, AND BONE BANGLES.

Bone awls or needles when carried from place to place, may have been stuck into the hair, or used to fasten articles of clothing about the person. Indeed, it is very probable that the main purpose of many so-called awls was that of pins to hold portions of the dress in position. An excellent specimen of bone awl or pin from Elgin county is represented in figure 64. It is five and three-quarter inches long, and is neatly bored near the head for suspension

Fig. 64.

Peculiarly interesting are the two bone specimens represented here (figs. 65 and 66). The fact that each is bored near the small end would indicate that they had been used as bangles, or ear-drops, or as part of a neck-lace, or in some other way about the person. They are the only specimens of the kind that have come into our possession. They were collected on lot 19, con. 3, London township.



65. 66.

(Half dia.).

INDIAN ARMOR.

We are accustomed to think of Old World peoples only, as having employed bucklers and coats of mail when engaged in warfare, perhaps, chiefly, because we associate these with the use of metals, but frequent reference is made by early writers to the employment of armor and shields among the natives of the Atlantic slope, just as we know, that western tribes, until within recent times, have used defensive devices of this kind. Dr. Walter Hough has summarized what is known regarding armor in an excellent article,* from which the following quotations are made relating to this usage among the Huron-Iroquois.

Shields.—"Charlevoix, writing of the Iroquois, observes that while the western tribes use bucklers of buffalo hide, it is pretty surprising that other Indian nations never use them†." Lafitau and the earlier missionaries, however, credit the Iroquois people with the shield in the following words:

'Their shields were of ozier or bark covered with *peaux passées*: there are some made of very thick skin. They had them of all sizes, and all sorts of figures.'‡

---

* Smithsonian Report 1893, p. 627 *et. seq.*

† Charlevoix, F. X. de, Journal of a Voyage to North America, Vol I., p. 338, London, 1761.

‡ Lafitau, *loc. cit.* II., page 197.

Body Armor.—There is sufficient historical evidence that the defensive weapons of the east coast were similiar to those of the west coast. The lakes and rivers with short portages rendered communication easy across this vast distance, and points out a great line of navigation, both of peoples and inventions. This is shown by the following reference:

'Some sixty or seventy years ago, a party of Iroquois, having crossed the Rocky Mountains, reached Lake Tathá in two wooden canoes, which at once excited the covetousness of a band of Carriers [Indians] who killed the strangers for the sake of their canoes. These having been brought here [Stuart's Lake] served as models for the building of the first home-made *dug-outs.*' *

On the Atlantic slope there is abundant evidence to show that the Iroquois used body armor. Cartier (Hakluyt Voyage, Vol. III., London, 1810), speaking of the Toudamani (Iroquois, probably Onondaga and Seneca), says:

'Also they showed us the manner and making of their armor; they are made of cordes and wood finely and cunningly wrought together.'

Lafitau, whose famous work "Moeurs des Sauvages Ameriquains," was published in 1724, gives a more detailed account of the defensive armor of the tribes of the north-eastern part of the present United States, and of Canada, probably referring chiefly to the Iroquois and Huron, with whom he was most familiar. He says (Vol. II., p. 197):

'Their cuirasses were a tissue of wood, or of small sticks of reed cut of proportionate lengths, strongly pressed against each other, woven and enlaced very neatly with small cords made of deerskin. They had cuissards and brassards (defensive coverings for the thighs and arms) of the same material. These cuirasses were proof against arrows armed with bone or stone, but not against those mounted with iron.

Charlevoix says of the Iroquois: 'Most had no defensive weapon, but when they attacked any intrenchment, they covered their whole body with small, light boards. Some have a sort of cuirass or breastplate of small, pliable rings, very neatly worked. They had even formerly a kind of mail for the arms and thighs, made of the same materials. But as this kind of armor was found not to be proof against firearms, they have renounced them without putting anything in their place.†

Sagard says that the Hurons (Iroquois) had armor made of wood.‡

Champlain also describes the Iroquois armor as made of wood and thread.§ A plate in the same volume shows a warrior in armor. Wooden breastplates were worn.|| Copper breastplates have been found like the gold breastplates of Peru.¶ One has been described as a plate of rich copper, in length a foot, in width half a foot, for a breastplate.** Lucian Carr thinks these breastplates were for ornament, like those found in the Ohio mounds.

---

* Morice, Rev. A. G., Proceedings of the Canadian Institute, 1889, p. 131. The Carriers previously had birch-bark canoes.

† Charlevoix, F. X. de, Vol. I., p. 338, London, 1761.

‡ Voyage des Hurons I., p. 144.

§ Champlain I., p. 201, Paris, 1830.

|| Hakluyt's Voyages III, p. 305.

¶ Jour. Anthrop Institute, Vol. XVIII., Feb. 1889.

** Archer account, Griswold's Voyages, p. 75, Vol. VIII. 35 Mass. Hist. Col.

The only reference to eastern skin armor is of the Mohawks, who 'wear sea-horse skins and barks of trees made by their art as impenetrable, it is thought, as steel, wearing a head-piece of the same.'*

LANARK COUNTY.

By T. W. Beeman, M. D.

The work in Lanark does not present any unusual features this year. A good deal of material has been collected for the Provincial Museum, the greater portion of it coming from Rideau Lake, Other localities in the county offer every inducement to investigation but so far it has been impossible to devote any attention to them. From the fact that the aboriginal remains in this section of Ontario are, presumably, of the same tribe or sub-tribe, it is all the more to be desired that some work should be done as soon as possible in making complete the collection. The specimens in the Museum from this county have almost entirely been secured from one place on Rideau Lake, the site of what was evidently a considerable town or village, in fact, so far as our work has gone, it was the only town of any size, or showing a long occupation. It is almost impossible to examine a square foot of earth without finding some evidence of aboriginal life. Fragments of pottery especially are very numerous. Broken bones, the marrow bones of animals, flint chippings, celts and arrows, both broken and complete, and many other things are found about this place. No matter how thoroughly the ground is looked over one year, the next yields a large quantity of specimens. Traces of European influence are rarely found, in fact, a single glass bead is the only thing that would suggest contact with the whites that occurs to me at present, and from this fact there can be no doubt that the town or village was deserted before or about the time of the appearance of the white people. Whether the place was abandoned as a result of long struggle between the Hurons and Iroquois or whether it was a result of the advent of the Europeans, further and more careful study may determine. It is certain, however, that some of the specimens found here are totally unlike the great bulk of the material. Whether this is a result of invasions by war parties, the result of inter-tribal commerce or from what cause, will possibly be revealed by future study. But few bone implements have been found, a fact that is no doubt due to the length of time that has elapsed since the migratory movement. Some fourteen or fifteen gouges were secured this year, all of them good specimens and a few showing a great amount of time and labor having been spent on their make. Altogether there have been about fifty gouges sent to the Museum from this county, and from the fact that they are all so well finished and that they are found here in greater numbers than in other localities, it would be a fair inference that they bear some peculiar and interesting relation to their former owners, a relation that may lead, later on, to a more accurate knowledge ooncerning them.

Of the celts secured, few deserve special notice. Two of them were slightly grooved. One or two of the celts were sharpened on both ends and one of the gouges was a chisel and gouge combined—the second one of that description found here. One copper spear was also added to the collection. Very few articles of soapstone are found, a fact that is difficult to understand, as large deposits of this material are found about the Rideau lakes, and it was a favorite stone with the Indians for the manufacture of many of their utensils.

Although considerable time has been spent in following up what seemed promising information, I have, as yet, been unable to find any burial places, not even single graves. Of course this may be due to the length of time that has elapsed since the aboriginal occupation, but it is to be hoped that we may yet find some graves in order to help more fully to determine the character of the tribe of this section.

---

* New England Prospect, p. 65.

In this, as in former years, it has been most encouraging to receive the support of everyone in this work and many specimens have been added to the collection by the generosity of people who had found them, but were willing to part with them for the Museum.

My work has been done chiefly on a small portion of the Rideau but during the summer a brief visit was paid to another part of the lake that showed every evidence of being rich in archæological material. Another year may allow opportunities for work there.

CAVE DWELLINGS.

The examination of caves in Europe has led to numerous important discoveries. It is to a study of the underlying contents of some of these that we are indebted for the classification of early man as *palæolithic* and *neolithic*, and for the terms stone age, bronze age, and iron age, as applied to periods of primitive development.

Some investigators in America seem to think that as thorough an examination of caves on this continent will yield similar results, or results, which, at all events, may have an ethnological bearing. It is always rash to predict on insufficient data, and more so still on none at all, but I feel tolerably confident that labor devoted to the excavation of cavern floors in America will prove devoid of such results as have rewarded men of science in the Old World. Numerous caves have been opened up and dug into casually without the least indication of human occupation pre-historically, and if one may form any opinion with regard to the disposition of the American of the remote past, by the temper of his now-a-days congenor, as evinced in the neighborhood of a cavern of any kind, we shall look in vain for troglodytic evidences, unless the *wendigo* had no far-back prototype to take possession of such subterranean places, or unless it can be shown that another race preceded the one we know. To the latter objection it may be replied that it is only by means of careful exploration that the question of prior occupation can be settled. There is something in favor of this view, but not so much to-day as there would have been twenty or thirty years ago, had the question been mooted then, for as already observed, a large number of likely places have been cleaned out for various reasons (some, purposely to search for human traces) without any satisfying result in this direction. A few of the most likely places in Ontario exist along the canon of the Grand River at Elora—one, more especially, at the foot of a ravine which forms the only easy path to portage beyond the falls which here descend forty feet—but in no case was anything found to indicate human habitation. In examining this one a good many years since, bed rock was struck at a depth of some three or four feet, if my memory serves me right, and the same result followed the cleaning out of even a larger cave (Kitchi-Matik's) nearly opposite to it, across the river.

Only half a mile or so down the river a pupil of mine named William Bain, found some cylindrical, purple and white shell beads on a ledge within a hole so small that a person entering had to do so head foremost, and even then could not get in more than half of his length horizontally. This, however, would seem to have been but a temporary hiding place for the wampum, some accident, no doubt having prevented the hider from returning for his property, which, it may be remarked, was clearly of white man's manufacture—probably from Albany or Hackensack.

Caves elsewhere in this province have been examined, more or less cursorily, no doubt, but there has been no inducement to proceed further with the work.

Mr. R. D. Meyers has examined some caves in eastern Ontario with a view to ascertaining whether any traces of their use as dwelling places could be discovered, and he has been kind enough, at my request, to supply the following information.

TWO ONTARIO CAVES.

By R. D. Meyers.

I beg to submit the following remarks on two caves, which I have examined particularly for the purpose of determining as to what extent they had been used by the Indians, either as dwellings or as storehouses. The first one is situated near the debouchment of the Marmora river into Crow bay, Hastings county, on the west side of the river and about 200 yards below the bridge, six miles north of Campbellford and two east of Healy's Falls. It had long been supposed to contain a large amount of native silver, which was said to be the source from which a famous pioneer of the Bay of Quinte district, Mr. John Bleecker, drew his supplies, and was one of several caves which were known as Bleecker's. From the fact that many years ago, an explorer, who had spent a few hours in its examination, died suddenly, the following day, there was a great deal of superstition regarding it in the minds of the inhabitants, and it was only after considerable coaxing that one could be induced to show its location. The entrance is in the river bank a few feet from the water's edge, and large enough to permit the ingress of an average man; it opens into a chamber about six feet by eight, and five feet high. There are two passages, one to the right, extending about thirty feet, to where it is filled up by silt, the other to the left, extends inward about two hundred feet where it contracts to an opening about two feet high and six inches wide, beyond this is a small chamber, with, as far as could be seen, no egress. There is a crevice running back sharply towards the river, but too small to permit a passage. The upper stratum of rocks at this point has been worn away, leaving a small triangular flat space, and on this rests a stalagmite, about the size and shape of a child's skull and of a drab color, so firmly fixed that it could not be broken off with the means at command, and so hard that it was difficult to mark with a knife. The tunnel was only high enough to sit up in with comfort at one place, in many others it was difficult to scrape through even lying at full length; it was generally narrow but there were two or three expansions, at one point reaching a width of about twenty feet. The air was pure and sweet. Several times the lantern went out but was easily relit. The stalactites were small and dirty looking. The only stalagmite seen was the one above described. The floor was of sand and small pieces of water-worn stone. There were no bats, in fact no traces of animal or insect life of any kind, and no sign whatever of the cave having been used either as dwelling or storehouse. There was one peculiarity never before noticed, viz., that the rays of light shed by the lantern seemed to be totally overcome by the dense darkness, leaving the lantern, as it were, the centre of a luminous globe, not more than a couple of feet in diameter. Careful consideration would indicate that the waters of a very large spring forced their way along a crevice in the rock, wearing it larger and larger as time passed on, until it reached its present dimensions. The clearing of the country caused the spring to dry up entirely, and at present no one seems to have even noticed, even in the wet season, any water flowing from it.

The second is situated in the 3rd concession of Tyendinaga about three miles north of Shannonville and twelve (by road) from Belleville. It is situated in a perfectly level field, about four hundred yards to the north is a ravine running southwest and northeast, which seems of glacial formation. There is a bowl-shaped depression in the field about thirty feet in diameter, and at its greatest depth about ten feet. On the north side is the entrance to the cave, about six feet high and the same in width, the descent to the floor is about eight feet per-perpendicular, thence over a pile of stones about fifteen feet more, making the total height inside about thirty feet and the same breadth. There is another pile of water-worn stone, reaching from the lowest point in the cave and gradually rising till it forms a junction with the roof at a point about one hundred and fifty feet from the entrance. Half-way along this rise is a rough irregular column of stone, perhaps ten feet in diameter, which seems to have been formed by the rotary flow of water. All the stone on the floor, from appearances, had fallen from the roof. About half-way along the eastern side is a small opening about two feet wide and three high, and the same in length. Beyond this the passage narrows to a few inches but reaches a height of twenty or twenty-five feet. Squeezing past this one reaches a chamber perhaps six feet wide and forty feet long, the floor gradually ascending to the roof as in the main chamber. The stalactites in this cave are very small, none having a length of more than an inch and a diameter of an eighth. There were no stalagmites, the floor and the walls were damp, and in places water exuded. There were a number of clusters of bats on the ceiling, and smaller clusters were occasionally found beneath projections on the walls. There is said to be a crevice in the inner chamber, through which a stone may be dropped and after an interval of a few seconds may be heard splash in the water, also an opening which leads through a series of galleries to an aperture in the bank of the ravine before spoken of, but they could not be found during a careful search. It is quite possible they may exist and have been covered either by accident or design. The bank of the ravine was carefully scanned for a distance of quarter of a mile, but no opening found, nor could anything in the nature of a waterway from the mouth of the cave to the ravine be discerned, although that would be the natural course. There is said to be a subterranean stream near Thrasher's Corners, a few miles north of Belleville, discovered while digging a well, and one gentleman was of the impression that it might be the stream which was tapped while experimentally boring for natural gas some years ago, and which now throws a jet of mineral water fully twenty feet high. The water supply of the city is taken from the Bay Quinte, near the Deaf and Dumb Asylum, and experts say that the intake is located just at the place where a large spring exists at the bottom of the bay.

The cave is perhaps on the course of such stream which, meeting an obstruction at this point, formed an eddy, which gradually wore its way around the pillar mentioned, until, the obstruction destroyed, it sank to its natural level again. The only theory to account for the absence of a waterway to the ravine would be that the upper surface of the cave and the head of the supply were on the same level. Nowhere in this cave were to be found any traces of human occupation and the difficulty of entrance deterred animals from using it.

A full account of the exploration, with productions of several photographs of the interior was published in the *Belleville Sun* a year ago, one of the reporters having been a member of the exploring party.

It is to be regretted that there was no time to examine the other caves of this locality, there being one at the Stone Mills, near Picton, and another near Huff's Island in Prince Edward County.

SHORT HISTORICAL AND JOURNAL NOTES BY DAVID PIETERSZ, DE VRIES, 1665.*

"As I have related the manner of living, and the appearance of the Indians at Fort Orange, I will state something of the nations about Fort Amsterdam.† . . . The Indians about here are tolerably stout, have black hair, with a long lock, which they let hang on one side of the head. The hair is shorn at the top like a cock's comb . . . Their condition is bad. They are very revengeful, resembling the Italians. Their clothing is a coat of beaver-skins over the body, with the fur inside in winter and outside in summer; they have, also, sometimes a bear's hide, or coat of the skin of wild cats, or *hefspanen* (raccoons), which is an animal most as hairy as a wild cat, and is also very good to eat. I have frequently eaten it, and found it very tender. They also wear coats of turkey's feathers, which they know how to put together; but since our Netherland nation has traded here, they trade their beavers for duffels-cloth, which we give for them, and which they find more suitable than the beavers, as they consider it better for the rain; and take two and a half length in duffels, which is nine and a half quarters wide. Their pride is to paint their faces strangely with red or black lead, so that they look like fiends They are then valiant, yea, they say they are mannette,‡ the devil himself. Some of the women are very well featured, having long countenances. Their hair hangs loose from their head; they are very foul and dirty; they sometimes paint their faces, and draw a black ring around their eyes. When they wish to cleanse themselves of their foulness, they go in autumn, when it begins to grow cold, and make, away off, near a running brook, a small oven, large enough for three or four men to lie in it. In making it they first take twigs of trees, and then cover them tight with clay, so that smoke cannot escape. This being done, they take a parcel of stones, which they heat in a fire, and then put in the oven, and when they think that it is sufficiently hot, they take stones out again and go and lie in it, men and women, boys and girls, and come out so perspiring that every hair has a drop of sweat on it. In this state they plunge into the cold water, saying that it is healthy, but I let its healthfulness pass; they then become entirely clean, and are more attractive than before. . . .

The productions are various. The principal one is maize, which is their corn, and which is by us called Turkish wheat. They pound it in a hollow tree. . . . When they travel they take a flat stone and press it with another stone placed upon the first, and when it is pressed they have little baskets, which they call *notassen*, and which are made of a kind of hemp, the same as fig-frails —which they make to serve them as sieves—and thus make their meal.§ They make flat cakes of the meal mixed with water, as large as a farthing cake in this country (Holland), and bake them in the ashes, first wrapping a vine or maize leaf round them. When they are sufficiently baked in the ashes they make good palatable bread. The Indians make use of French beans‖ of different colors, which they plant among their maize. When the maize (which is sown three or four feet apart, in order to have room to weed it thoroughly) is grown one, two, or three feet high, they stick the beans in the ground alongside of the maize stalks, which serve instead of the poles which we use in the Fatherland for beans to grow on. . . . There are also pumpkins, water-melons and melons. They dry the nuts of trees and use them for food. There are also ground-nuts, and white ground-nuts, which are poisonous to eat—a mason of the Company having died in consequence of eating one of them. They also grow here hazelnuts, large nuts in great quantities, chestnuts, which they dry to eat, and wild grapes in great abundance. . . . The Indians use a kind of hemp which they understand making up, much stronger than ours is, and for every necessary purpose, such as *notassen*, (which are their sacks and in which they carry everything); they also make linen of it. (!) They gather the maize and French beans the last of September and October, and when they have shelled the corn, they bury it in holes, which they have previously covered with mats,* and so keep as much as they want for the winter and while hunting. . . .

---

* From N. Y. Hist. Society's Papers, Series II.

† The account he speaks of having already given is almost word for word that of Dominie Megapolensis, quoted in the Archæological Report for 1890-91, p. 68.

‡ Evidently a form of Manitou, or manedu.

§ The ambiguity of this sentence will be removed if for the words "press it" we substitute *grind the maize*, and for "pressed" read *ground*.

‖ Probably indigenous beans, but called "French" by the Dutch, who also called maize "Turkish wheat."

There are great quantities of deer, which the Indians shoot with their bows and arrows, or make a general hunt of, a hundred, more or less, joining in the hunt. They stand a hundred paces more or less from each other, and holding flat thigh bones in the hand, beat them with a stick, and so drive the creatures before them to the river. As they approach the river they close nearer to each other, and what is between any two of them is at the mercy of their bows and arrows, or must take to the river. When the animals swim into the river, the Indians lie in their canoes with snares, which they throw around their necks, and drag them to them, and force the deer down with the rump upwards, by which they cannot draw breath.

At the north they drive them into a *fuyk*, which they make of palisades, split of trees, and eight or nine feet high, and set close to each other, for a distance of fourteen or fifteen hundred paces on both sides, coming together like a fuyk (funnel); . . . the opening is one or two thousand paces wide. When the animal is within the palisades, the Indians begin to come nearer to each other, and pursue it with great ardor, as they regard deer-hunting the noblest hunting. At the end of the fuyk it is so narrow that it is only five feet wide, like a large door, and it is there covered with the boughs of trees, into which the deer or animal runs, closely pursued by the Indians, who make a noise as if they were wolves, by which many deer are devoured, and of which they are in great fear. This causes them to run into the mouth of the fuyk with great force, whither the Indians pursue them furiously with bows and arrows, and from whence they cannot escape. They are then easily caught with snares. . . .

Striped bass "is caught in large quantities and dried by the Indians,—for at this time the squaws are engaged in sowing their maize, and cultivating the land, and the men go a-fishing in order to assist their wives a little by their draughts of fish. Sometimes they catch them with seines from seventy to eighty fathoms in length, which they braid themselves, and on which, in place of lead, they hang stones, and instead of corks which we put on them to float them, they fasten small sticks of an ell in length, round and sharpen it at the end. Over the purse, they have a figure made of wood, resembling the devil, and when the fish swim into the net and come to the purse, so that the figure begins to move they then begin to cry out and call upon the *mannetoe*, that is, the devil, to give them many fish. They catch great quantities of this fish; which they also catch in little sea-nets six or seven fathoms long, braided like a herring net. They set them on sticks into the river, one, and one-half fathoms deep. . . . .

---

* *Lined* with mats?

IN WHAT MANNER THE INDIANS BURY THEIR DEAD.

"They make a large grave, and line it inside with boughs of trees, in which they lay the corpse, so that no earth can touch it. They then cover this with clay, and form the grave seven or eight feet in the shape of a sugar-loaf, and place palisades around it. I have frequently seen the wife of the deceased come daily to the grave, weeping and crying, creeping over it with extended body, and grieving for the death of her husband. The oldest wife by whom he has had children does this; the young wife does not make much ado about it, but looks about for another husband. They keep a portion of the dead in the house. I have seen at the north, * [in Canada] great multitudes of Indians assembled, who had collected together the bones of their ancestors, cleaned them, and bound them. "They dig a square grave, the size and length of a person, and over it erect four pillars, which they cover with the bark of trees . . . . . ; they set a time when they will bury them, when all the friends will have a great gathering and bring ample supplies of provisions. It is accordingly announced in their village, that a great festival is to be held, with frolic and dancing. This festival continues ten days, during which time their friends come from other nations on all sides, in order to see it held, and the accompanying ceremonies which are attended with great expense. Under cover of these ceremonies, dances, feasts and meetings, they contract new alliances of friendship with their neighbors; saying that as the bones of their ancestors and friends are together in the little bundles . . . . . so may their bones be together in the same place, and that as long as their lives shall last, they should be united in friendship and concord, as were their ancestors and friends, without being able to be separated from each other, like as the bones of their ancestors and friends of each other were mingled together. One of them—their chief, a magician—delivers a speech over the bones (saying) 'that if they remain thus united, their enemies can have no power over them.' They then bury the bones in the grave, with a parcel of zeewan,† and with arrows, kettles, knives, paper and other knick-knacks, which are held in great esteem by them, and cover them with earth, and place palisades around them, as before related. Such is the custom on the coast in regard to the dead. The chief doctrine held among them is the belief in the immortality of the soul by some. Others are sceptical on this point, but not far from it, saying, when they die they go to a place where they sing like ravens; but this singing is entirely different from the singing of angels.

HOW THE INDIANS AT THE NORTH ARM THEMSELVES WHEN THEY GO TO WAR.

"When I was at the North, I saw Indians who were going to war. . . Their weapons were bows and arrows . . . which they carry daily, and each one had in his hand a shield of leather as thick as buffalo-skin. I took it to be elk's-hide, as these animals are numerous there. . .

---

* As Mynheer "David Pietersz, DeVries" has appropriated almost verbatim, the account of the Maquas, or Mohawks, as given by Megapolensis, here he is evidently following some one else, for we have no reason to believe that he was ever in that part of the country he refers to as "the north," unless within a short distance of the shore.

†Among the Dutch settlers wampun was called zeewan, seewan or seawant.

THEIR DANCES.

When they dance they stand two and two beside each other, which I have seen at the North. They dance in two, three and four pairs. The first pair carry a tortoise in their hands, [*] as this nation say they have descended from a tortoise-father, at which I laughed. They then asked me where our first father came from. I said he was called Adam, and was made of earth. They said I was a fool to say that he was made of a thing that had no life. I replied that it was full of life, for it produced all the fruit upon which they lived. They answered that the sun, which they looked upon as God, produced it, for in summer he drew the leaves from the trees, and all the fruits from the ground.

Anno 1643. The 22nd February, there broke out a war among the Indians. The Mayekandus,[†] who came from Fort Orange, wanted to levy a contribution upon the Indians of Wickquasgeck and Tapaen, and of the adjacent villages. There were eighty to ninety of them each with a gun on his shoulder. There came flying to my house, four or five hundred Indians, desiring that I would protect them. I answered that I could not do it, as the Indians at Fort Orange were our friends, and that we could not interfere with their wars; that I now saw that they were children, and that they were flying on all sides from eighty to ninety men, where they themselves were so many hundred strong; that it was displeasing to me that they should be such soldiers, as it was to mannetoe himself,—that is to say, the devil; but that I saw now that they were only children. As my house was full of Indians, and I had only five men with me, I made ready to go the fort to obtain some soldiers for the purpose of having more force in my house. So I took a canoe, as my boat was frozen up in the kill, and went in the canoe or hollow tree, which is their boat, as before related, between the cakes of ice, over the river to Fort Amsterdam where I requested Governor Kieft to assist me with some soldiers, as I was not master of my own house, because it was so full of Indians, although I was not afraid they would do any harm; but it was proper I should be master of my own house. The Governor said he had no soldiers; that I must see how it would be in the morning, and stop at night with him, which I did. The next day the Indians came in troops on foot from my house to Pavonia. . . . I spoke to some of them and they said they had all left my house. . . .

MASSACRE OF THE INDIANS.

The 24th of February, sitting at a table with the Governor, he began to state his intentions, that he had a mind to *wipe the mouths of the Indians*. . . . I answered him that there was not sufficient reason to undertake it. . . . But it appeared that my speaking was of no avail. He had, with his co-murderers, determined to commit the murder, deeming it a Roman deed, and to do it without warning the inhabitants in the open lands, that each one might take care of himself against the retaliation of the Indians, for he could not kill all the Indians. . . . So was this business begun between the 25th and 26th of February in the year 1643. I remained that night at the Governor's, sitting up. I went and sat in the kitchen, when, about midnight, I heard great shrieking. . . . (I) saw nothing but firing, and heard the shrieks of the

---

[*] Among the "Mohawks" the clan whose totem was the tortoise claimed, and were allowed precedence, having sprung as they asserted from a woman who, falling from the sky into the water, was saved by a huge tortoise that gave her a resting place on its back.

[†] Mohawks—Iroquois.

Indians murdered in their sleep. I returned again to the house, by the fire. Having sat there awhile, there came an Indian with his squaw whom I knew well, and who lived about an hour's walk from my house, and told me that they two had fled in a small skiff, . . . that the Indians from Fort Orange had surprised them, and that they had come to conceal themselves in the fort. I told them they must go away immediately that there was no occasion for them to come to the fort to conceal themselves; that they who had killed their people were not Indians but the Swannekens, as they called the Dutch. They then asked me how they could get out of the fort. I took them to the door, and there was no sentry there, and so they betook themselves to the woods. When it was day the soldiers returned to the fort, having massacred or murdered eighty Indians, and considering they had done a deed of Roman valour, in murdering so many in their sleep; where infants were torn from their mother's breasts, and hacked to pieces in the presence of the parents, and the pieces thrown into the fire and in the water, and other sucklings were bound to small boards, and then cut, struck, and pierced, and miserably massacred in a manner to move a heart of stone. Some were thrown into the river, and when the fathers and mothers endeavored to save them, the soldiers would not let them come on land but made both parents and children drown—children from five to six years of age, and also some decrepit persons. Many fled from the scene, and concealed themselves in the neighboring sedge, and when it was morning, came out to beg a piece of bread, and to be permitted to warm themselves; but they were murdered in cold blood and tossed into the water. Some came by our lands in the country with their hands, some with their legs cut off, and some holding their entrails in their arms, and others had such horrible cuts and gashes that worse than they were could never happen. And these poor simple creatures, as also many of our own people, did not know any better than that they had been attacked by a party of other Indians,—the Maquas. After this exploit the soldiers were rewarded for their services. . . . At another place on the same night at Corler's Hook, on Corler's plantation, forty Indians were in the same manner attacked in their sleep, and massacred there in the same manner as the Duke of Alva did in the Netherlands, but more cruelly. . . . As soon as the Indians understood that the Swannekens had so treated them, all the men whom they could surprise on the farm-lands they killed; but we have never heard that they have ever permitted women or children to be killed."

Can we wonder that the Indians, when retaliating, committed 'atrocities'? But did any Indian atrocity ever exceed in treachery and fiendishness this Dutch butchery in 1643?

Oct 19-1908

ANNUAL
ARCHÆOLOGICAL REPORT

1896-97,

BEING PART OF

APPENDIX

TO THE REPORT OF THE

MINISTER OF EDUCATION

ONTARIO.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BRO'S & RUTTER, Printers, &c., 68 and 70 Front Street West.
1897.

Proceedings of societies, and papers of individuals are solicited in exchange for the Ontario Archæological Reports. Exchanges should be addressed, Curator, Ontario Archæological Museum, Department of Education, Toronto, Canada.

CONTENTS.

PAGE.

- Presentation 1
- Acknowledgments 3
- Additions to the Museum 5
- Mounds 14
  - Mound-Builder Theories 17
  - Mound-Builders—Indians 17
  - Mound Building "Habit" 17
  - Mound-Building—Probable Origin of 18
  - Mounds for Burial Purposes 18
  - Mounds—Memorial 19
  - Mounds, Early Ontario References to 19
  - Otonabee Serpent Mound 19
    - Measurements 24
  - Gore's Landing Ridge 26
  - Miller Mounds at Hiawatha 28
  - Mounds at Cameron's Point 30
  - Mounds on Sugar Island 33
  - Preston Mounds at Hastings 35
- Gore Island ExcavatiOn 37
- Margaret's Island 37
- Ferguson's Island 37
- Foley's Islands 37
- Serpent-like, Natural Mound in Innisfil 41
- Embanked Hollows 41
- Small Pits or Caches 45
- Ossuary on Main's Farm, Beverly 46
- Mississauga Grave in Scarboro 46
- Bald Head, Prince Edward County 48
- Notes on some Specimens 49
  - Flints 49
  - Stone Axe 50
  - Clay Pipes 51
  - Stone Pipes 51
  - Copper 53
  - Engraved Shell Gorget 56
  - Stone Tablet 56
  - Preston Pendant 57
  - Small Triangular Glass Ornament 58
  - Bird Amulets 58
  - Small Human Figure 59
  - Bone 59

PAGE.
Iroquois Dance-Mask 61
Crania 62
Scottish Plighting Stone 64
Rice Lake and Innisfil Mounds, by A. F. Hunter, M. A 67
Balsam Lake Neighborhood, by Geo. E. Laidlaw 80
Graves in Whitchurch, by W. A. Brodie 47

APPENDIX A.

Ontario Mounds—T. C. Wallbridge 89
" " —Rev. Dr. Reed 90

APPENDIX B.

Serpent Worship—Prof. E. B. Tylor 91
" " —James Fergusson 94
" " —Prof. F. W. Putnam 95

APPENDIX C.

The Old Bay House 96

APPENDIX D.

Bibliography of the Archæology of Ontario, by A. F. Hunter, M.A 98
To the Memory of Horatio Hale 117

ARCHÆOLOGICAL REPORT.

To the Honorable G. W. Ross, LL.D., M.P.P., Minister of Fducation:

SIR,—The material in the Ontario Archæological Museum is now so generally representative in character (although still far from being complete), that anxiety need no longer exist to procure specimens, unless such as may possess peculiar value as types, or come from some new locality, or are needful for purposes of comparison.

On this account more time may hereafter be devoted to the examination of places for the purpose of recording all available information relative to the occupancy and distribution of peoples, and the marks by means of which their limits may be determined, apart wholly from any possible or probable return in the shape of relics, although the bringing together of good specimens should not be overlooked.

The work of the past season was signalized by the identification of the principal earthwork on Mizang's Point, Otonabee, as a serpent mound, the only one known in Canada, as it is perhaps the only effigy mound of any kind, and it is not displeasing that we should thus be enabled to mark in Ontario, the last year of the first hundred that have elapsed since the birth of Pre-Historic Archæology at Hoxne, in Suffolk, England.

One of Europe's most distinguished anthropologists wrote a few years since, "The master-key to the investigation of man's primæval condition is held by Pre-historic Archæology." The statement is as true now as it was then. Every day the subject attracts more and more attention.

Interest in Ontario has very much increased, and it is safe to say that there are now a hundred intelligent thinkers on this subject where not long ago there was scarcely one.

The removal of the Museum to the Educational Department should render the collection more popular, and add to its value as an important educational factor; failing which, any museum is worse than useless.

I have the honor to be,

Yours respectfully,

DAVID BOYLE.

ACKNOWLEDGEMENTS.

For donations and courtesies of various kinds, thanks are tendered to Messrs. H. T. Strickland and G. W. Hatton, Peterboro'; Adam Whetung, Indian Village, Chemong Lake; Dr. J. M. Shaw, Dr. W. T. Harrison, Messrs. James Miller, Robert Borland, Thomas Borland, Thos. Wallace, J. A. McIntyre, Archibald Weir, and Mrs. W. Foley, Keene; Messrs. F. Birdsall and Adam Humphrey, Birdsall; Messrs. John Preston, J. H. Scriver, and Dr. Coghlin, Hastings; Thos. Blezard, M.P.P., Villiers; Pashageezhik, Alderville; Mrs. James Houghtailing, Alnwick; Squire Thomson, Hiawatha; Mr. George Braithwaite, Gore's Landing; Messrs. Aaron Main, James Hay and J. Humphrey, Beverly; Dr. James McDermott, and Messrs. E. Richardson and James Tocher, Sunderland; Messrs. Geo. E. Laidlaw, James Laidlaw and M. Irwin, Bexley; Mr. A. F. Hunter, B.A., and Dr. Addison, Barrie; Mr. Henry Smith, New Hamburg; Mr. Chadd, Weller's Bay; Mr. E. B. Biggar, Toronto; Dr. Hamilton, Parkdale; Mr. Alfred Willson, Toronto; Dr. G. S. Schwalbe, Strasburg, Germany; Dr. T. W. Beeman, Perth; Dr. S. H. Collins, Lawrenceburg, Ind.; Mr. James L. Hughes, P. S. I., Toronto; Prof. C. C. Willoughby, Cambridge, Mass.; Mr. Wm. A. Brodie, Bethesda; Rev. Joseph Annand, M.A., Santo, New Hebrides; Messrs. David Martin, Robert Martin and Jonathan Ashbridge, Scarboro; Peter Campbell, Duntroon, and Prof. Clarence B. Moore, Philadelphia, U. S.

ADDITIONS TO THE MUSEUM.

515 copper beads from mounds on Sugar Island, Rice Lake, Otonabee Township.

300 shell beads (marginella conoidalis), Otonabee Township.

865 " wampum disks, Otonabee Township.

1 double-ended copper axe, three and a quarter pounds, Otonabee Township.

1 gorget of "Mexican onyx," Otonabee Township.
1 half of gorget, " " "
2 stone axes or celts, " "
3 bone tools, " "
2 horn tools, " "
6 skulls, " "

10 skulls, mounds on north shore of Rice Lake.

1 large turtle-shaped (busycon) gorget. The only engraved shell in the museum. Mound No. 2, Miller's farm, Hiawatha, Otonabee.

Several fragments of large conchs, " " "
2 halves of bone harpoons " " "
1 half of a slate gorget, " " "
2 stone axes, " " "
2 horn tools, mound No. 1, " " "
1 bone arrow or knife, mound No. 1, " " "

1 stone pendant, centre mound, Preston's farm, Asphodel Township, Trent River.

1 shell (unio) scraper, lot 8, concession 8, Beverly Township.

12 shell beads (marginella conoidalis), Bald Head, Weller's Bay, Prince Edward County.

1 piece of Huronian slate in course of preparation for a gorget. H. Mayor's farm, Innisfil Township, Simcoe County.

1 large mealing-stone, Hatrick's Point, Otonabee, Rice Lake.

1 large mealing-stone, Birdsall's Bay, Rice Lake.

1 large mealing-stone, near Troy, Wentworth County.

1 small mealing-stone, Mizang's Point, Rice Lake.

1 large mealing-stone, " "

70 miscellaneous specimens from shore and islands, Rice Lake.

DR. JAMES MCDERMOTT, SUNDERLAND.

1 turtle-shaped (limestone) pipe, found near Sunderland, and not far from the Tocher embankment, Brock Township, Ontario County.

1 perfect, plain clay pipe, Brock Township.

1 imperfect, square-mouthed clay pipe, Brock Township.

JAS. L. HUGHES, PUBLIC SCHOOL INSPECTOR, TORONTO.

1 turtle shaped (soapstone) pipe, Darlington Township, Durham County.

1 good clay pipe, with human figure facing the stem. Has been broken and repaired. Ball's Point, Lake Scugog, Ontario.

3 imperfect clay pipes from the same locality.

5 flints from various places in Durham County.

1 fragment of well-marked pottery. Ball's Point, Lake Scugog.

JOHN A. McINTYRE, OTONABEE.

1 stone pipe (dusky white soapstone) of the platform variety. Base much diminished. Pipe shows marks of long use and wear. Lot 15, concession A (W. ½), Otonabee.

1 very good flint from the same farm.

JOHNSON PAUDUSH, HIAWATHA.

1 bird amulet, Oneida, Middlesex County.

HENRY SMITH, NEW HAMBURG.

2 bird amulets (casts), Oxford County.

1 bar amulet (cast), Oxford County.

AARON MAIN, BEVERLY.

1 shell (busycon) drinking cup. (This vessel was made by taking out the interior portion of the shell and leaving only the outer wall), lot 8, concession 5, Beverly, Wentworth County.

6 skulls from ossuary, lot 8, concession 8, Beverly.

JAS. HAY, TEACHER, SHEFFIELD.

1 skull from ossuary, lot 8, concession 8, Beverly.

J. HUMPHREY, TROY.

1 skull from the Main ossuary, Beverly.

MRS. WM. FOLEY, OTONABEE.

1 stone adze, lot 12, concession 9, Otonabee.

H. T. STRICKLAND, PETERBORO' CITY.

1 stone gouge, Stony Lake, Douro Township.

1 double-ended celt, Stony Lake, Douro Township.

ARCHIBALD WEIR, OTONABEE.

2 stone gouges, Otonabee Township.

1 simple form of celt from naturally shaped stone, Otonabee Township.

THOMAS WALLACE, OTONABEE.

1 stone gouge, lot 9 concession 7, Otonabee Township.

ROBERT BORLAND, OTONABEE.

1 copper spear or knife, lot 13, concession 2, Otonabee.

THOMAS BORLAND, OTONABEE.

1 large stone gouge, lot 13, concession 2, Otonabee.

THOMAS BLEZARD, M.P.P., OTONABEE.

1 stone chisel, lot 20, concession 2, Otonabee.

P. QUINN, OTONABEE.

1 copper axe, found on field adjoining the Serpent Mound on Mizang's Point.

1 semi-circular slate, (woman's knife).

E. B. BIGGAR, TORONTO.

1 grooved axe, (Micmac), New Brunswick.

DR. S. H. COLLINS, LAWRENCEBURG, INDIANA.

1 celt made from water-worn stone, grooved to form a means of handle attachment, Kentucky.

1 large mealing-stone with two oval cavities, from farm of Mr. Hayes, near Lawrenceburg, Indiana. Very fine specimen.

DR. C. S. HAMILTON, PARKDALE, TORONTO.

1 square-sided celt, Durham County.

GEORGE BRAITHWAITE, GORE'S LANDING.

1 slightly grooved adze, with ridges above and below the groove, Hamilton Township.

THOMAS THOMSON, OTONABEE.

1 small bone specimen, having a resemblance to a whistle, Block A, Indian Reserve, Hiawatha, Otonabee.

DR. G. S. SCHWALBE, STRASBURG, GERMANY.

6 recent European skulls.

6 mummy heads from tombs near Thebes, Egypt.

MRS. JAMES HOUGHTAILING, ALNWICK.

1 long bone awl or needle.

ALLAN COMEGO, ALDERVILLE.

2 rice threshing sticks.

Dr. T. W. Beeman, Perth.

1 stone gouge, Rideau Lake, Lanark, Ontario.

2 unfinished pipes of soapstone, roughly blocked out. In one the boring has been begun to make a stem-hole.

2 worked pieces of soapstone, perhaps in preparation for small pipes.

1 hematite celt. This is the only specimen made of this material in the Museum, that has been found in Ontario.

103 flints, fragments of pottery, rubbing stones, etc., all from the County of Lanark, Ont.

Rev. D. B. Macdonald, Bendale.

1 remarkably singular clay pipe, lot 5, concession 1, Scarboro.

Alfred Willson, Toronto.

1 very fine bird amulet, Thedford, Lambton County.

1 fragment of bar amulet, showing section of diagonal hole, Bosanquet, Lambton County.

1 bone case, made from part of a large rib, and engraved on both sides, Bosanquet Township, Lambton County. See figure following.

Prof. C. C. Willoughby, Cambridge, Mass.

1 cast of the Neanderthal skull.

Henry Merriam, Harwood.

14 celts, mostly of rude form, Hamilton Township, Northumberland County.

1 small chisel, Hamilton Township, Northumberland County.
1 roughly made hammer-stone, " "
1 small unfinished tablet, " "
1 broken tablet, " "
1 broken bird amulet, " "
2 flints, " "
2 soapstone pipes, " "

Adam Humphrey, Birdsall.

1 mealing-stone, Cameron's Point, Asphodel Township.

——— ——— ——— ?

1 large mealing-stone, Troy Wentworth County.

Jonathan Ashbridge, Scarboro'.

1 skull from grave on lot 26, concession B, Scarboro.

WM. A. BRODIE, BETAESDA.

1 excellent human mask from a clay pipe bowl.

1 grotesquely formed (human figure) clay pipe bowl.

1 imperfect bird-form from bowl of clay pipe.

1 flattened (vase-form) imperfect soap-stone pipe.

1 small human face on fragment of pottery.

1 small human figure, rudely carved in soapstone—an inch and five-eighths long. See figure following.

1 oddly shaped and rudely made stone pipe.

1 small slate bead, badly bored.

1 copper arrow, 2½ inches in length.

10 bone beads from ⅝ to 2⅞ inches long.

2 shell beads—shells simply perforated.

1 small, bead-like tube of iron, perhaps a concretionary form.

3 bears' teeth—from grave.

1 small stone used as a sharpener, probably for bone awls.

11 imperfect bone awls.

2 flint scrapers.

1 small stone chisel.

1 very small stone chisel.

1 upper portion of clay pipe bowl, ground smooth to remove marks of fracture and form a coarse ring.

2 roughly made clay disks from fragments of pottery.

Numerous celts, hammer-stones and fragments of pottery, horn, bone, and shell.

PROF. CLARENCE B. MOORE, PHILADELPHIA.

Several cinerary clay urns from Georgia sea islands. These urns were found in mounds, and contained the cremated remains of infants. The vessels are in a fragmentary condition, but with some care and time may be restored.

A. F. HUNTER, M.A., BARRIE.

1 grotesquely modelled black clay pipe, bearing human face, farm of Mr. Jas. Davis, Oro township, Simcoe county.

1 gorget (slate), Scott form, Vespra township, Simcoe county.

1 bone needle, from farm of Mr. Neil McNevin, Oro township Simcoe county.

GEORGE MONKMAN, BARRIE.

1 small and very beautifully made, bone scoop or gouge, from farm of Mr. Wm. Roadhouse, Albion township, Peel county.

REV. JOSEPH ANNAND, M.A., NEW HEBRIDES.

Mr. Annand, the well known Presbyterian missionary of Santo, New Hebrides, writes. "In August, having spent a few days in voyaging around this island looking for eligible openings for the settlement of missionaries, I was fortunate enough to get a few things for your museum, which, for purposes of comparison, may prove useful. They are now packed and ready for shipment by the "Dayspring" when she sails for Sydney early next month (November). I will instruct our agent (the Rev. James Cosh, D.D.,) to forward the box to you by the Huddart-Parker line to Vancouver, thence by the Canadian Pacific Railway to Toronto.

I am sorry that my collection is so small and unsatisfactory, but I have done what I could, and I trust that even these few things may prove of interest to you and others. Most of the things are marked so that you can see to what use they have been put, also, a reference to the manner of production is added.

The only expense connected with these things that the museum is expected to bear, is the cost of transport from Sydney, home. The cost of goods here I cheerfully contribute to the museum, in the success of which ethnologically, I am deeply interested.

Yours faithfully,
J. ANNAND.

3 stone axes.
4 chisels and adzes.
1 three-pronged Santo spear made from human bone.
2 single-pronged Santo spears made with wooden points.
1 wooden spear.
2 "pudding" dishes.
2 "pudding" pounders.
1 Santo bow, with assorted arrows.
1 Malekula bow with arrows.
1 Eromangan bow with arrows.
1 Nguna club, (for war purposes.)
1 Epi club, (for war purposes.)
4 Santo war clubs of different kinds.
1 figure-head of a canoe, representing a man.
1 bamboo staff.
1 Santo mouth-organ.
2 pandanus-leaf Oba mats.
1 pandanus-leaf Santa basket.
2 pandanus-leaf Futuma basket.
1 Nguna breast-plate.
4 boar's tusks (use explained on label).
1 belt made of bark.
1 belt made of twine.

1 Kava cup.
2 Kava plates.
1 Kava spoon.
1 East Santo dress, with block and beads, etc.
1 Santo cocoanut milk-dish.
1 Santo clay pot.
2 strings of native beads (shell).
2 combs.
A bundle of arrows.
2 sticks with which fire has been made—to show method of making fire.
1 piece of sleeping mat from Efate.
1 very old 'pudding' dish from Malo—made with the old stone and shell instruments."

[The example of the Rev. Mr. Annand is commended to Canadian missionaries and business men elsewhere. We desire especially to procure specimens to illustrate religious life, and the domestic life of women and children. Contributions should be accompanied by copious notes respecting the manufacture and use of each object.]

GEORGE E. LAIDLAW.

3 large mealing stones, Bexley Township, Victoria County.
4 stone gouges, Bexley Township, "
1 cylindrical hammer stone, Bexley Township, "
1 long stone chisel, Bexley Township, "
1 pestle-like stone, Bexley Township, "
19 celts and chisels, Bexley Township, "
1 celt, highly polished, perhaps jadeite, "
1 slick stone, Bexley Township, "
3 pieces of graphite, from village sites, "
1 celt of hematite, not polished, Bexley Township, "
1 degraded tablet, Bexley Township, "
1 roughly blocked-out tool, Bexley Township, "
1 partly worked slate pebble, Bexley Township, "
4 small rubbing stones, Bexley Township, "
1 brass tomahawk pipe, pattern chisel, Bexley, "
1 ghost arrow of brass, Bexley Township, "
1 trader's clay pipe, Bexley Township, "
1 piece of worked red slate, Bexley Township "
1 unfinished tool of Huronian slate, Bexley, "
1 blocked out soapstone pipe, Bexley Township, "
1 worked (small) piece of soapstone. Bexley, "
1 quartz drill, Bexley Township, "
1 quartz arrow head, Bexley Township, "

7 flints, Bexley Township, Victoria County:
1 flint scraper, Bexley Township "
1 flint spear or knife, Bexley Township, "
2 woman's (slate) knives, Bexter Township, "
24 small stone disks, Bexley Township, "
19 Small clay disks, Bexley Township, "
2 stone beads, Bexley Township, "
1 circular piece of baked clay, Bexley Township, "
1 white soapstone pipe, Bexley Township, "
1 soapstone pipe—human figure seated, Bexley, "
1 soapstone vase-shaped pipe, Bexley Township, "
1 small stone pipe, Bexley Township, "
1 pipe, woodpecker figure, Bexley Township, "
1 double-faced clay pipe, Bexley Township, "
3 human faced pipes, Bexley Township, "
2 square-mouthed clay pipes, Bexley Township, "
1 flat bottomed clay pipes, Bexley Township, "
20 imperfect clay pipes, Bexley Township, "

3 pipe-stems and numerous fragments showing cord-marks in the holes, Bexley Towhship.

13 miscellaneous fragments of quartz, etc., Bexley Township, Victoria County.

1 pear-shaped slate pendant, Bexley Township, Victoria County.
5 bone beads, " "
1 bone bangle—fish head ? " "
1 worked piece of bone, " "
1 bone bangle—numerous holes, " "
1 wolf's tooth, bored, " "
2 wolf teeth unbored, from grave, " "
1 bear's tooth, ground smooth at point, "
2 long bone beads, " "
2 horn arrow-tips(?) " "
19 bone awls or needles, " "
1 horn club-spike (?) " "
1 bone club-spike (?) unfinished, " "
1 piece of deer-horn, worked, " "
1 deer foot bone, worked, " "
2 shell disks, " "
8 dog-whelk beads, " "
3 bored mussel shells, " "
3 worked mussel shells, " "

1 small, black, roughly oblong, but slightly tapering piece of argillite, $\frac{3}{8}$ inch thick, and deeply hollowed on both sides, evidently used in sharpening tools.

1 small, grey, syenite, hammer-stone.

2 small pieces of hematite, oxydised to a very bright red,

2 perforated stone disks 1¼ inch in diameter and ½ an inch thick.

2 unbored stone disks—one a naturally water-worn pebble.

1 small piece of worked soapstone, rubbed considerably on one edge.

1 piece (4 inches) of a long clay pipe stem. May have been at least an inch longer.

1 fragment of clay pipe showing a well-made human face.

1 small, imperfect oval hematite ornament.

1 half of a semi-circular slate knife

1 shell bead.

1 wolf-like stone pipe, Bexley Township, Victoria County.

PETER CAMPBELL, DUNTROON.

5 stone pipes, Nottawasaga, Simcoe County.
3 clay pipes, " "
Several stone beads, " "

BY PURCHASE.

14 choice flints from various places in the United States.

11 quartz arrow-heads from Georgia.

12 flints, Baby Farm, York Township.

24 flints from various places in Ontario.

1 obsidian arrow-head, California.

10 small arrow-tips, Oregon, U.S.

1 bone bead used as a tally, Wentworth County, Ontario.

3 bone awls, York County, Ontario.

2 horn tips, showing marks of work, York County, Ontario.

1 small oval shell ornament, apparently made from a quahog.

3 clay pipe-heads, plain and slightly ornamented.

1 clay pipe-head with strongly marked human face.

1 North-west pipe-head inlaid with lead and catlinite.

1 North-west pipe-head, on which has been carved a long-tailed quadruped, the head of which is broken.

1 large clay pipe, Udora, Ont.

1 bird amulet, Quinn Farm, Dufferin Street, N.W. corner of Toronto.

7 pieces of discoidal wampum.

2 women's (slate) knives, Bowes' Farm, Oakwood, Ontario.

10 bone, shell and glass beads, Baby Farm, Lambton, near Toronto.

1 large gouge, Clayburn Farm, Albion Township, Ontario.

1 small gouge, very finely made, York Township, Ontario.

1 grooved stone hammer, Minnedosa, Manitoba.

1 stone chisel, Quinn Farm, Dufferin Street, near Toronto.

1 stone adze, plain, Chester, near Toronto.

8 small celts from various places in Ontario, from Dr. Rear.

8 photographs illustrative of the Sun Dance near Battleford in 1895, Mrs. G. Moodie, N.W.T.

1 Iroquois dance-mask, formerly owned by Chief Crow. Miss E. Pauline Johnson, Brantford.

Total additions this year, 2,500.

MOUNDS.

There is apparently no more fascinating belief than that which attributes the construction of our American mounds to a semi-civilized and peacefully disposed race, which was ruthlessly exterminated by the savage Indian. It is a poetic belief. It affords material for homilies on "man's inhumanity to man," and those who are fond of repeating the silly saying that "history repeats itself," find here a new-world parallel to numerous old-world events. It gratifies the *survivals* among us who deplore the departure of "the good old times," and affect to regard, with deepest grief, present-day degeneracy. It appeals to man's mythologic sense very powerfully; and it pleases people who are morbidly minded to picture to themselves the awful horrors that must have been inflicted on the poor, industrious, and happy mound-builder, whose reeking scalp was torn from his head by bloodthirsty human fiends, who also destroyed houses, farms and gardens, and drove away herds of domestic cattle!

Squier and Davis thought the mound-builders were connected with the "semi-civilized nations which formerly had their seats among the Sierras of Mexico, and upon the plains of Central America and Peru." Sir Daniel Wilson thought the Aztecs on their way south [south, whence?] constructed the mounds. Short, in his North "Americans of Antiquity," thinks the Toltecs built them. (Dr. Brinton doubts that there ever was a *people* called Toltecs.) Sir Wm. Dawson believes that some who were called Tallegwi were the mound-makers; General Thruston connects them with the ancient Mexicans; Morgan thought they were akin to the Pueblo Indians, but even the names of authors need not be mentioned by whom the mounds have been ascribed to the Phœnicians, Jews, and Egyptians!

Perhaps the poet Bryant has had as much to do as any writer in perpetuating a belief in the high-class mound-builder. His beautiful poem has found its way into numerous school readers, has been spouted ten thousand times at "receptions" and "examinations," and is fully accepted by the reciters, by their parents, by all the members of their families, and by those who have sorrowfully, almost tearfully, listened to the pathetic verses.

It seems vain to explain that the mound-makers could not have had cattle, that they knew not how to temper copper, that in mechanical

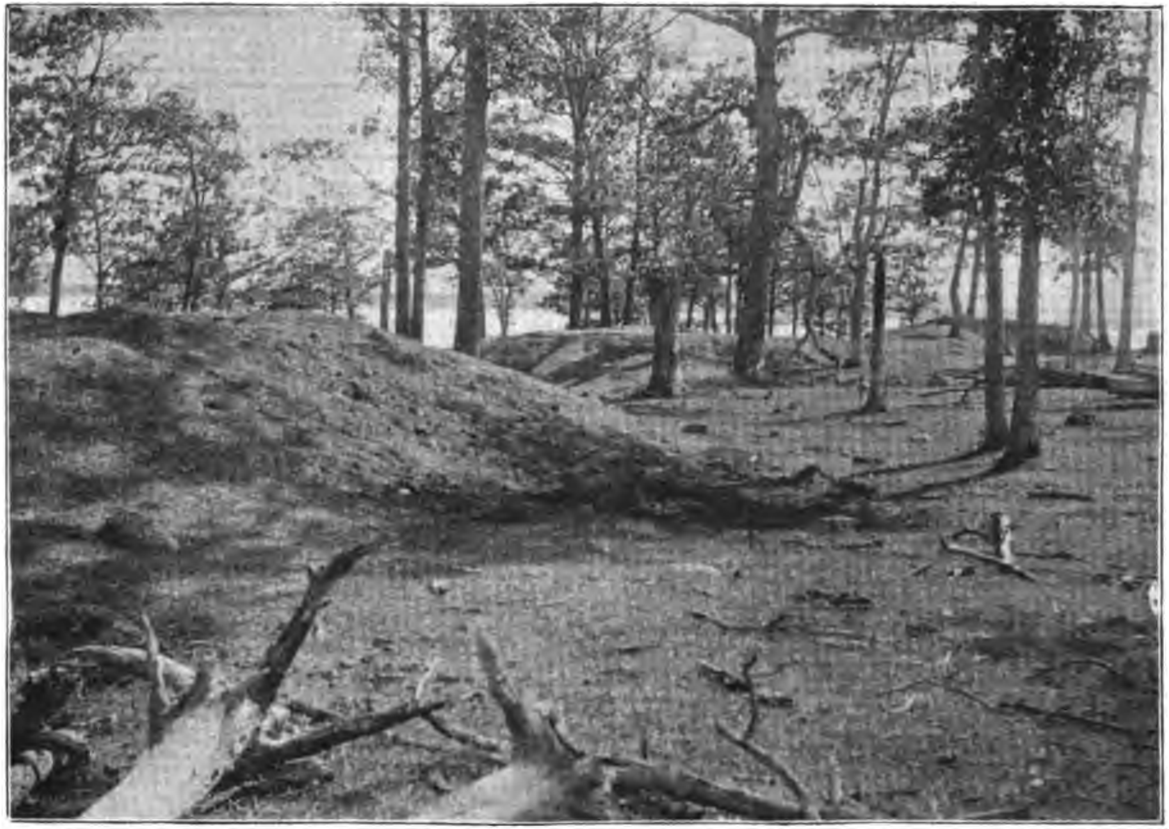


FIG. 1.—OTONABEE SERPENT MOUND. EGG MOUND TO LEFT. SERPENT'S TAIL TO EXTREME RIGHT.
Photo. by DR. W. T. HARRISON, Keene.

skill they were not superior to Indians as we know them, and that a similar statement may be made regarding them as tillers, that morally and socially they do appear to have been a superior people, and that they did not possess at all an elevated kind of religion.

It is probable that the majority of those who entertain so much reverence for the mound builders, and corresponding regret for their disappearance, will die in the faith, and indeed it seems a pity to deprive them of what yields so much comfort.

Recent writers like Sir John Lubbock, and Dr. W. H. Dall, hold the opinion that the mound-makers were simply Indians. Dall says they "were the immediate predecessors in blood and culture of the Indians described by De Soto's chronicler and other early explorers—the Indians who inhabited the region of the mounds at the time of their discovery by civilized man." Schoolcraft, for a wonder, took this view. Major J. W. Powell, Director of the United States Bureau of Ethnology, says: "For more than a century the ghosts of a vanished nation have ambuscaded in the vast solitudes of the continent, and the forest-covered mounds have been usually regarded as the mysterious sepulchres of its kings and nobles. It was an alluring conjecture that, that a powerful people, superior to the Indians, once occupied the valley of the Ohio and the Appalachian ranges, their empire stretching from Hudson Bay to the Gulf, with its flanks on the western prairies and the eastern ocean; a people with a confederated government, a chief ruler, a great central capital, a highly developed religion, with homes and husbandry, and advanced textile, fictile and ductile arts, with a language perhaps with letters, all swept away before an invasion of copper-hued Huns from some unknown region of the earth, and prior to the landing of Columbus."*

Even, however, some of those who agree that the mass of evidence favors acceptance of the view that Indians were the mound-makers, write and speak as if all the mounds were constructed by the same tribe of Indians: There is no more reason to believe this than that all the mounds were built at the same time. The mound-habit was not thus limited—it was ethnic, and we find, therefore, that it extended almost from the 25th to beyond the 51st northern parallel, and from the 69th to the 101st west meridian, the greatest length being in the direction of a line from Cape Sable, Florida, to Lake Winnipeg, Manitoba, and the greatest breadth from Point Pemaquid in Maine, to Bismarck in North Dakota. Nor would it be reasonable to claim that the mounds dotting this vast territory represent the wanderings of a refugee people not necessarily numerous, but whose migrations covered a considerable expanse of time. Face to face as we are with facts accumulated mainly during the last half century, if, indeed, it would not be more correct to say during the last quarter, we conclude that American mound-makers were not of one "nation or tongue," nor were they of one way of thinking, even in the construction of the tumuli.

The making of mounds, cairns and pyramids seems to be inseparable from human nature, embodying ideas of safety, strength, advantage, superiority, dignity, honor or worship, connected with the living or with the dead.

---

* Report of the Bureau of Ethnology, 1890-91, p. xli.

In the pyramids of Egypt we see the most marvellous examples of a proclivity which is typified in the children's game, where one takes possession of a bank or a sand-heap, announcing that he is "King of the castle" and each of the other players is "a dirty rascal."

Nor does it appear hard to trace the genesis of constructing "high places." It is allowable to suppose that in the very first burials, the bodies were laid upon the ground, and covered with leaves, or branches, and in course of time with earth.* This practice may have been incited from a respect for the dead, or out of a desire to protect the remains from the attacks of wild animals, which, after all, is but one way of showing the same feeling. When a notable one dies the thought is natural that his resting-place should be distinguished, and the simplest way to accomplish this is to increase the size of the heap that covers him. As thus the memory of individuals was maintained why not similarly that of events? The idea of sacredness would come in due course, and by the time man reached this stage, he would be capable of elaborating his conceptions in extensive structures, more or less artistic in design, for there is nothing in human experience upon which he will bestow more attention, more time, and more labor, and lavish more expense than on what is connected with his religious duties. Viewed in this light it is less difficult to account for the prevalence of mounds than for the almost universal use of the bow, and the equally universal pattern of the arrow-head; and we need be at no loss to account for the Maya and Aztec masonry any more than for the earth-works thrown up by the Chickasaws in the upper valley of the Mississippi; by the Shawnees in Georgia and Kentucky; by the Muskoki in some of the Gulf States; by the Cherokees in Tennessee and West Virginia; by Micmacs in Maine, and by Algonkins of one kind or other in western New York, Pennsylvania, Ohio, and southern Ontario. Thus too may we in some measure account for the peculiarities that distinguish groups of widely separated mounds, the characteristics of which are no doubt in keeping with the prevailing tastes, notions, superstitions, or dispositions of the builders.

It is perhaps safe to affirm that the largest number of mounds have been made for burial purposes, which we have supposed to be the original *motif* in the construction of such earth-works, yet some of us are very much puzzled to account for the other very large number that do not appear to have had anything to do with human interments, and here, of course, are excepted such as were most probably defensive entrenchments. But there are people who, without much hesitation, prate fluently about 'beacon mounds,' 'sacrificial mounds,' 'temple mounds.' 'sacred mounds,' and so on, as if by the book. There are only two kinds of tumuli respecting which it is sometimes possible to speak with assurance as to their purpose, and one, as to its appearance. The former are burial and fortification works, and the latter, what is known as 'effigy,' representing an animal of same kind—man, beast, or bird. Of burial heaps certainty is reached only after a thorough examination ; there is nothing in their exterior to indicate their purpose. Defensive banks form an enclosure, and it is understood that these were probably surmounted by some sort of wooden structure. In many cases the intention of enclosures may have been something quite different. Some effigy mounds were also burial mounds.

---

* "The simple tumulus seems the most ancient sepulchral monument. It was raised by the Greeks and Trojans, and was common to Romans, Gauls, Germans, and other European nations 2,000 years ago. Charlemagne, wishing to put a stop to heathen practices, decreed that Christians should have grave stones and not pagan tumuli.—From *The Scottish Gael*, by James Logan, p. 482."

Lacking proof as to the purpose of the other thousands of such earthworks that are scattered over the territory whose limits have been named, there is, perhaps, more reason to look upon them simply as memorial mounds, or monuments of important events, than as structures for any other purpose whatsoever. More recently it became the custom in some countries to mark historical spots with cairns and monoliths, and the practice has come down to our own day.

Occasional references have been made since early in the century to the existence of mounds in this province, but in a few instances at least, it would seem that the chroniclers meant ossuaries.[*]

In 1820, a Rev. Dr. Reed observed mounds (?) on the "Beach at Burlington Bay" (see Appendix A.) About 1855 a mound is said to have been opened in Augusta township. In 1860 Mr. T. C. Wallbridge reported mounds, some of which he examined on the Bay of Quinte shore (see Appendix A), and within the last few years one mound was discovered in Humberstone township, Welland county, and another on Tidd's Island. Dr. Cyrus Thomas's map showing the "Distribution of Mounds in the Eastern United States," places four groups on the western side of the Niagara river; of these we have no record, and if to the foregoing we add a few on Rainy River, more than five hundred miles north-west of Toronto, and most likely the work of a people who constructed similar works in Manitoba and North Dakota, we shall have named nearly all the hitherto known localities in Ontario possessing, or reputed to possess, *mounds* as distinguished from enclosing embankments.

OTONABEE SERPENT MOUND.

Last summer my friend Mr. H. T. Strickland, of Peterboro', directed attention to an embankment of considerable extent on a piece of property owned by himself and Mr. G. W. Hatton, on lot 7, concession 7, township of Otonabee, and which embankment Mr. Strickland believed to be of artificial origin. Notwithstanding my confidence in his judgment it was not without more than a little misgiving that I visited the place, which is beautifully situated on Mizang's[†] Point, near the mouth of the Indian River, on the north shore of Rice Lake, about ten miles south-east of Peterboro'. The situation is one of the most commanding on the shore, the land rising with a sharp acclivity to a height of not less than seventy or eighty feet from the water.

---

[*] An ossuary is a pit formed to receive human bones, the earth to cover which did at first, no doubt, form an elevation of not more than thirty-six inches, but became a hollow as the bones decayed. The only object of the ossuary-makers appears to have been the covering of the bones, but, in accomplishing this, the replacement of the earth would naturally constitute a low mound. It will readily be seen, however, how different such a mode of burial is from merely placing the remains on the unexcavated surface, and subsequently forming over them an earth heap several feet in height. Every ossuary was, as its name implies, a sepulchre, but every mound was not.

Although in a few parts of the United States mound building has extended into the historic period, it is quite undeniable that many of the tumuli point to dates that are pre-Columbian, but how far beyond it is impossible to say.

[†] The common name for this point is "De Zang's," but on the authority of Pashageezhik, of Alderville, now a divinity student at Victoria College, Toronto, the spelling should be as above. Mizang was father of the late chief Paudash, of the Hiawatha band.

On the very crest of this point lies an embankment nearly two hundred feet in length, in a generaly easterly and westerly direction, one end pointing a few degrees north of east, and in line with on oval mound twenty-three feet distant, the longer axis of which measures fifty, and the shorter axis, thirty-seven feet. South of these and just on the beginning of the slope are several small mounds, and a hundred and thirty-six feet north of the western end is a larger one, all of which will be referred to hereafter.

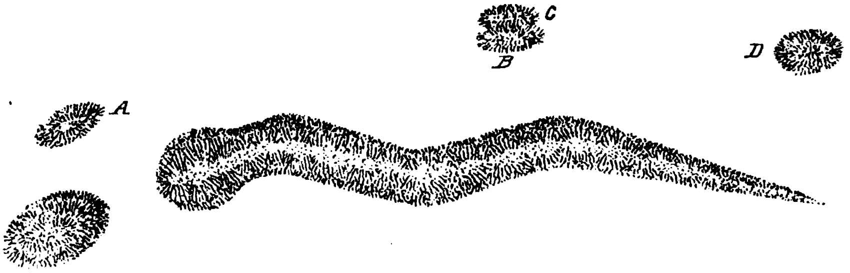


Fig. 2.—Ground plan of Otonabee Serpent Mound.

In view of the conclusion ultimately arrived at regarding the principal of these earthworks, it may appear strange that there should ever have been any doubt in my mind as to their origin, but this will be understood when it is stated that in the first place the conditions were wholly new to me, so far as Ontario is concerned, if, indeed, the bank was not merely an interglacial freak, which I strongly suspected; that in the second place the outline of the works was somewhat disfigured by the promiscuous digging of persons in search of skulls, and finally, that in any event, stronger evidence was required to prove the artificial origin of the ridge and other elevations than was yielded by external appearances alone. Every one who has paid any attention to topographical features in those portions of the continent that betray glacial action most markedly, knows how frequently works of human origin are simulated (if it be allowable so to say) as a result of deposition or of denudation. A critical examination of the situation from the geological standpoint resulted in the following conclusions: first, that as Mizang's Point is itself of glacial origin, it would seem improbable that the banks and mounds on and near the crest of the slope, towards the lake, could have been laid down with their longer axis across the line of deposition that formed the ground itself on which they stand; second, that for a similar reason their existence could not be attributed to erosion or denudation, and third, that no natural action could be held accountable for the fact that the ground immediately along the north side of the elevations is considerably lower than the general level. The apparently irregular shape of the long mound lent color to the supposition that the formation was a natural one, and the presence of the egg-shaped structure near its eastern extremity suggested a former connection between the two.

Whites, as well as Indians (Mississaugas), in the vicinity were agreed that the long mound had been thrown up as a means of defence against the Mohawks. This supposition implies a much longer period of Ojibwa occupation than we are warranted in acknowledging on historical grounds, but at any rate the assumption is a baseless one, for the reason that as a fortification it must have lacked completeness, the whole of the neighboring area being accessible from the lake shore on the eastern and western sides of the point, besides which, the embankment exists where, on account of the steepness of the descent towards the water, such a work was less necessary than on the plain lying to the north.

The only reason for referring thus in detail to the conditions affecting the identification of the Otonabee earthworks is to impress upon readers the necessity that exists for the exercise of great caution, before venturing the assertion that any bank or mound is of human origin simply because of its external appearance.

As a rule, all doubt may be set at rest by making an examination of the structure interiorly. If it is of natural formation, the arrangement of the materials of which it is composed will differ very much from that of one erected by human agency. In the former case, and if of clay, a section three or four feet deep will present a homogeneous appearance—if of sand and gravel, these will be arranged in parallel layers; while, if artificial in its character, the soil will show a 'disturbed' appearance, that is, it will be mixed in small masses, or in streaks, of different colors, corresponding to the various depths from which it has been collected by the workers who were engaged in its construction.

It now only remained to make a deep cut through, or into, one of the mounds, with the permission of Messrs. Hatton and Strickland, who, with Dr. J. M. Shaw, of Keene, were on the spot, and in less than an hour the men employed to dig laid bare a section of the oval mound, which left no doubt as to its human origin.

Having become satisfied on this score, I determined to carry the trench clear through, ten feet east of the shorter axis of the mound, the men working on opposite sides. This line was selected at the outset because some skull-seekers had already done a little surface digging there to a depth of about eighteen inches, near the crown. Eight feet from the north edge, and two feet below the surface, were two human skeletons in a sitting position, and about the same distance from the south side were a skull and some of the large bones of the arms and of the legs—these also were within two feet of the surface, but somewhat more than twelve inches higer, measuring from the general level From the western end another cut was made five feet wide to meet the former cut, the two thus forming a large T. The depth of the latter cut at the centre of the mound was six feet four inches, which carried us somewhat below the outside level, and in addition to this we made test-holes at intervals, to a depth of over a foot further, to be sure that no disturbed soil should escape observation.

The making of this opening revealed at various depths, all beyond three feet, a human skull, some dog or wolf teeth, the jaw of a small quadruped, small pieces of mussel shells and charcoal, until at a depth of four feet seven inches (at this point on the base level) we came upon a human skeleton lying on its right side. While there was no doubt that the remains found in the first cut were those of intrusive, or comparatively recent burials, it seemed quite as clear that the bones here found on the base level had been so placed before the construction of the mound, and it appears probable that the same holds good in relation to the isolated skull found only a little more than a foot higher.

Within seven feet of the centre of the mound, and two feet from the surface, were burnt human bones, but not associated with ashes or charcoal, and a few inches below these were two or three small fragments of pottery, the only specimens of the kind observed. Still nearer to the centre, and twenty inches deeper, or three feet eight inches from the surface, was a bed of black earth mingled with ashes and mussel shells, and below this, on the base level, was a circle of stones rudely put together, about three feet in diameter. The stones were such as may be found in the neighborhood, but little or no choice had been exercised as to size or shape, for they varied from four or five pounds to twice as much in weight, some being angular and others water-worn. Although many (not all) of the stones bore evidence of having been subjected to considerable heat, there was no trace of charcoal or ashes near the circle.

At frequent intervals during the excavation of the oval mound, I travelled backwards, forwards, and around the long zig-zag embankment, now that I began to feel certain as to its origin, puzzled to account for its configuration, and its relation, if any, to the more easterly structure on which we were at work. On one of those occasions, when standing on top of the ridge some fifty feet from the westerly extremity, it struck me as being strange that this end of the bank should taper so gradually that its terminating point could not be distinguished accurately within a foot or more. This suggested the idea of a mere beginning, or of failure on the part of the builders to complete their work, and the next thought was to examine the other end. Here, however, there was a very marked dissimilarity, for the bank rose at a sharp angle to a height of four feet and was much more expanded than any other portion of the mound. In the course of another walk along the earthwork I was struck with the thought that this was a serpent mound, but the idea seemed absurd to one who, on account of frequent disappointments, is prone to cast doubt on fanciful resemblances of every kind. Still, there was the broad, abrupt head—there was the tapering tail, and between these were three well-marked convolutions—the zig-zags hitherto without meaning—not so prominent as those of the Adams County mound in Ohio, but, as I now think, much more natural.

It now remained to apply measurements for the purpose of ascertaining whether any plan had been observed in the construction. Stakes were driven at the tip of the tail; at the place where it seemed to me I could detect the barest trace of a connection between the tail (rattle?) and the body proper; at the central point in each bend, as nearly as I could guess; and at the nose. From the latter point to the first bend behind the neck is thirty-seven feet, between the first and second bends forty feet, six inches, between the second and third bends forty feet, between the third bend and what I judged previously to be the end of the body, forty feet six inches, and from this to the tip of the tail thirty-one feet, giving a total of a hundred and eighty-nine feet.

It will be observed that the three middle measurements closely correspond, and when it is taken into account how difficult it is to fix upon central points by mere eyesight, in the curves of a bank upwards of twenty feet wide at the base, it may be assumed that the distances mentioned were exactly forty feet each. Even the head and tail proper may have originally reached the same lengths. In the latter case it is easy to account for the disappearance of several feet, and a slight extension of the nose would bring it within exactly twenty feet of the egg-mound, which is considerably steeper and less likely to have suffered much by wearing away, either from natural causes, or by the trampling of cattle.

On the identification of this earthwork as a serpent mound, it will readily be understood that more than ordinary interest became connected with every one of its details. Unlike the Scottish one on Loch Nell, in Argyleshire, and the Adams County one in Ohio, the head of the Otonabee serpent points in an easterly direction. It differs from both also in the number of its convolutions which exceed those of the Scottish mound, and are less than those of the Ohio one, the former having only two, giving the work an S-like look, and the latter having seven.

The position of the oval mound, too, at once suggested the ancient combination of the serpent and the egg, and here we are tempted to institute a comparison with the Adams County example, quite to the advantage of the Otonabee structures, for while the oval on the head of the former consists of an embankment enclosing a basin, the Otonabee mound is a solid structure throughout.

Reference has already been made to the morbid depredations of diggers anxious merely to lay bare human remains or to possess a skull. At numerous points along the top of the serpent mound excavations for this purpose have been made, but in no case apparently to a depth exceeding two feet. As the cast-up earth about these places is mingled with bone-fragments, there is little doubt that the earthwork has been used for burial purposes by a people who succeeded the mound-builder—a people to whom the structure possessed no significance, or, at any rate, a significance very different from what it had to those who, at infinite pains, labored to put the embankment into shape. It will be seen that as in every instance the vandal-holes have been sunk on the crown of the ridge, the result is serious disfigurement. Selecting the highest point of the mound left undisturbed, seventy feet from the end of the tail, I had a cut made five feet wide, extending from the north side to the middle of the bank, which is here twenty-four feet across the base, simply to examine the interior nature of the structure, the surface of which was here somewhat stony, a fact that no doubt accounts for its hitherto non-disturbance by white savages, some of whom are said to have searched (very stupidly) for hidden treasure, and not for bones. Human bones were exposed within two feet of the surface, but like those of the egg-mound, all much decayed. Some of the boulders taken from this cut were all that a man could lift, but many of them did not weigh more than from ten to twenty or thirty pounds each. The placing of the earth was manifestly done by hand, layers and patches of dark soil being mingled with yellow clay ; beyond this there was nothing to indicate man's agency, but the proof yielded was ample. A slight examination was made at the head of the mound, the result being to show that here also comparatively recent burials had been made, but lower than eighteen inches from the surface there was no sign of bones.

South of the serpent mound, on the slope facing the lake, are several small elliptical mounds. One of them near the head is forty-one feet in length and nineteen feet wide, another near the tail is forty feet long and twenty-two feet wide, and between these is what may be called a twin-mound, consisting as it does of two earth-heaps side by side and touching each other. The more southerly of these is thirty-seven feet long, and about twenty-two feet in width, while the other is shorter and only fourteen feet wide. In every instance the longer axis is east and west. A superficial examination of all these brought to light intrusive burials in each case, within a foot or eighteen inches of the surface.

In the smaller or northern portion of the twin mound were buried an adult and a child. The skull of the adult is in excellent preservation.

Only two other good skulls were procured from these mounds, and one of them from mound D, near the serpent's tail, presents the best example, we have in the museum of what is known as the Inca bone. (See figures following.)

The mound referred to as lying almost due north of the serpent's tail is distant a hundred and thirty-six feet, its axes measuring thirty-three feet east and west, and twenty-eight feet north and south, but as this work has been completely gutted, the dimensions given may exceed the original size, for no doubt much of the earth now on the outside was thrown from the excavation. In any event, the original condition is so utterly destroyed that not much attention was paid to it.

The following table presents all the chief measurements of the serpent mound group :—

	Length.	Breadth.	Height.
Serpent mound	189 ft.	Average 24 ft.	Average 5 ft.
Serpent mound head	....	30 ft. 9 in.	4 ft. 6 in.
Distance between serpent and egg mound	23 ft.	....	....
Egg mound	50 ft.	37 ft.	6 ft.
Mound A, south of egg mound	41 ft.	19 ft.	3 ft. 6 in.
Mound B, north part of twin mound	28 ft.	14 ft.	2 ft.
Mound C, south part of twin mound	37 ft.	22 ft.	2 ft. 6 in.
Mound D, south of serpent's tail	40 ft.	22 ft. 6 in.	2 ft. 6 in.

Here occurs not only the oval form which in itself is noteworthy, but we are brought face to face with the fact that we possess a serpent mound of no mean proportions, and not only a serpent mound, but one in combination with the egg, unless it can be shewn that the oval form thus named occupies a wholly adventitious position, which has no relation whatever to the widely entertained primitive myth connecting these two objects. Evidence, however, favors the belief that the two structures on Mizang's Point are complementary, for not only is the oval mound accurately in line with the head and neck of the serpent, but the great height of the former, as compared with that of those lying on the face of the hill, would seem to indicate, that its proportions were made to correspond with those of the serpent, while on the contrary the mounds lying along the south side are under half the height, are less regularly shaped, and are suggestive of being imitative structures—the work, perhaps, of another and more recent people.

With regard to serpents, (drawings, incisings, or effigies of which are found at wide intervals over the greater part of North America), it has been observed that in nearly every instance the model was a rattlesnake. Both, or either, of the extremities may aid in this identification. Unfortunately the outline of the Otonabee serpent's head is not sufficiently sharp to assist us, but the great length of the tail portion (all behind the last bend), was intended, we may suppose, to include a rattle. Indeed, there is a very slight bend about midway in this portion, which may have been meant to mark the feature in question.

Imagination may run riot in attempting to account for the origin and purpose of such earthworks. With regard to the Otonabee Serpent and Egg only two things are certain, namely, that the embankments are of human workmanship, and that they were made by a people—Indians of course—prior to the arrival here of the Huron-Iroquois. Of what stock these people were we have no knowledge. A lingering fondness for such structures among some tribes of Ojibwa origin, until very recently, if regarded as an evidence of heredity, might warrant us in attributing to some old-time Algonkins the making of these mounds. However this may be, our chief source of wonder is connected with the ideas that were entertained by the mound-builders in fashioning such serpent-and-egg embankments. It has been well observed respecting the similarities existing among primitive folk everywhere in the shaping of their weapons, and the tenor of their myths, that, given corresponding environments, human nature being the same all over the world, is bound to manifest itself along certain fixed lines.* In a general way it is easy to concede this proposition, but in a case like the one before us there is a difficulty. We may fully admit the probabilities favoring the respect paid by early man to the serpent on the one hand, and to the egg on the other, in connection with the great mystery of life, the latter symbolizing its origin, and the former, on account of its periodical skin-shedding, being suggestive of rejuvenescence and perpetuity—hence of eternity, but it is not so easy to account for the coupling of these symbols, by peoples widely separated in point of time, as well as of distance.

---

* "We are driven to the conclusion that the actions of men, being determined solely by their antecedents, must have a character of uniformity, that is to say, must under precisely the same circumstances always issue in precisely the same results."—Buckle's History of Civilization, Vol. I, p. 20.

The accompanying picture of the mounds on Mizang's Point is from an excellent photograph kindly taken by Dr. W. T. Harrison, of Keene. Part of the Egg-mound is seen at the left of the picture, which is from a point looking towards the south-west.*

The ground plan is from a rough sketch in my note-book, and is in no sense accurate, as it was hoped that we would have had a survey made by a professional man. shewing not only the proportions of the principal earthworks, but of the smaller, outlying mounds.

It would almost appear gratuitous to suggest the desirability of preserving this earthwork. Messrs. Strickland and Hatton would no doubt consent to sell a few acres here if they could be assured that as public property the place would be neatly fenced, and properly kept. As a summer resort the situation is unsurpassed by any on the lake, and the laying out of a small park enclosing this Serpent-mound would add very materially to the natural attractions. Failing action on the part of the local municipal authorities towards the restoration and preservation of these mounds, and the setting apart of the ground as public property, it may be suggested that the Provincial Government acquire a right to hold the place. The interest that attaches to such works is of a general character—it extends even beyond the country in which they are found, and it would be shameful either to neglect them utterly, or to let them remain in private hands. Wherever mounds of unusual form have been destroyed, as at Marietta, Ohio, the act is now deplored, and we accordingly find that in other parts of the state effective steps have been taken to preserve monuments of this kind for admiration and study in all time. By the efforts of Prof. Putnam and others the Serpent Mound on Brush Creek has been placed beyond the reach of vandalism, and more recently the state authorities have, at a cost of many thousand dollars, secured upwards of five hundred acres that are surrounded by the remarkable embankment known as Fort Ancient. Compared with the cost of such extensive parks, that of the Otonabee mounds would be but trifling—a few hundred dollars at most, even should the whole of the lot, about sixty acres, be purchased.

Unique as is this serpent mound so far as the archæology of Canada is concerned, there can be only one opinion with respect to its maintenance from disfigurement, and, perhaps, from demolition.

GORE'S LANDING RIDGE.

On the announcement by the newspapers that a mound of the foregoing description had been discovered, communications were received from various quarters that similar earthworks were supposed, by the writers, to exist here and there.

The first of this kind to which attention was directed is a long serpentine bank at Gore's Landing, on lot 16, concession 9, broken front, Hamilton Township, on the south side of Rice Lake, and south-west of Mizang's Point. The information came from Mr. Reginald Drayton, a well-read gentleman, whose summer residence is beautifully situated at the extremity of the ridge in question, on the lake shore. The spot possesses considerable natural attractions, forming as it does a deep hollow of twenty-five or thirty acres, in the side of a bluff, which here forms the lake shore. Mrs. Traill, in her interesting story, "The Canadian Crusoes," which every boy and girl in the province may read with great profit, as well as pleasure, refers to this place as the 'Happy Valley.' We might reasonably enough suppose that it was a favorite Indian camping-ground, if Indians were actuated by æsthetic motives in their selection of resting-places, but as safety from attack was with them a prime consideration, this would be the very kind of place to shun, for a foe with possession of the steep, though low hills, that almost surround the Happy Valley, would hold occupants of the hollow at a great disadvantage. Besides, nothing has been found in it to show that it ever was an aboriginal village-site or even a camping-ground. The bank in question has, however, long been considered as of artificial origin, and, aside from the irregularity of its contortions, it cannot but be admitted that there is much to favor this supposition. It is six hundred feet long, ten to forty feet across the base, and rises gradually from a few inches at the south-west extremity to fully six feet near the north-east end. With the permission of Mr. Charles Neill, on whose property most of the bank is situated, a cut was made on the south side as deep as the base level, and to the centre of the ridge, laying bare stratified deposits of sand, gravel and clay, leaving no doubt as to their natural origin. A circular elevation to the south-east was also tested by means of a cut thirteen feet long, three feet wide, and equally deep at the centre, where the trench terminated, and here, too, it was seen that only natural forces had been at work.

---

* Dr. J. M. Shaw, of Keene, was also good enough to take photographs of the mounds, and in various other ways showed his interest in the work.

The results here were in no wise disappointing, nor was the labor thrown away, for the educational value attached to the removal of wrong impressions is subordinate only to the formation of those that are correct. People whose attention is not specially directed to matters of this kind may readily arrive at erroneous conclusions, and these opinions in course of time, if uneradicated, lead to misunderstanding and confusion. But if the appearance of a natural bank suggest to ourselves artificiality, is it to be wondered at that the savage should arrive at a like conclusion, finding therein also the similitude of this or that animal? It is indeed worthy of consideration whether natural formations of the kind in question have not originated the idea of effigy mound-building. That a tortuously laid down ridge should prompt the idea of a serpent seems to be natural enough, and as many superficial, interglacial deposits have spurs and sinuses at various angles to the main body, the imagination of simple-minded man might easily lead to the conclusion that 'somebody' had constructed them to imitate the parts of an animal on a huge scale. We know how quick he was to perceive the possibility of adapting the natural shape of a stone, a bone, or a shell to his tool-requirements, and we are not warranted in limiting his sense of adaptability and comparison to objects of this kind. On the contrary we have proof, not in America only, but in almost every part of the world, that early man was struck with the resemblances that existed between topographical features and animal forms, the names of some places having been bestowed on this very account.

There is, however, no evidence to indicate that any respect, or even attention, was paid to the long, serpentine ridge in Happy Valley, for, as already mentioned, no immediate traces of occupation, or of resort have been discovered, with the exception of a human body, which is said to have been exhumed when digging the foundation of Mr. Drayton's house. This burial was probably of very recent date, although nothing could be learned as to the depth at which the remains were found, or the position in which they lay.

MILLER MOUNDS.

Attention was next directed to the farm of Mr. James Miller, a little west of the Indian village of Hiawatha, and at the mouth of the Otonabee River. Here were two mounds close to the farmhouse, on the face, and near the top of a gentle slope facing southwards, and rising, perhaps, eighty or a hundred feet above the water. One of these mounds, a few yards north of the house, had been opened by a former tenant, or owner, to make a root-cellar, and, it is reported that he found two or three human skeletons. The other mound, only some thirty or forty feet from the eastern gable of the house, had never been disturbed. Like those on Mizang's Point, it was oval, and measured thirty-five feet from east to west, and nineteen feet, six inches, from north to south. Its outline was so sharply marked that there was no difficulty in ascertaining its proportions within a few inches, although it did not exceed three feet in height.

Near the south-east edge there had been a fire, as was shown by a quantity of ashes, and by the earth being burnt red, but this may have been caused by the burning of a stump. At the centre of this mound and only two feet from the surface, was a skeleton, lying north and south. The skull was in pieces, but the large bones were in a fairly sound condition, and remarkable for their great size—the most massive I have ever seen taken from any Indian burial-place. These are now in the museum. Another skeleton was found lying on its right side within a foot of the surface, and a third one, near the north-east edge, about eighteen inches down, was lying on its left side. The heads of both were towards the west. The only specimens found in this mound were two small celts, two tools made of deer-horn points, and a very well-made bone arrow, or knife, the only one of the kind in our possession.

The construction of this mound was extremely rude, the materials—clay and small and large stones—having apparently, been thrown together regardless of order, and some of the largest stones, weighing from fifty to sixty pounds, were in immediate contact with the bones. The clay was so hard, that even at the surface, it was necessary to use picks for its removal.

As the adjoining mound had been cleaned out effectually no attention was given to it, but in a low-lying field south-west of the bluff, and within three hundred yards of the river was a very noticeable circular elevation seventy-four feet in diameter, but only about two and half feet in height, Mr. Speirs the tenant stated that in ploughing round this place he frequently turned up human bones. As the field was in crop, with his permission the oats were cut, to enable us to dig. Squire Thomson, of Hiawatha, informed me that as he remembered this mound twenty years ago (when still unploughed) it was probably six feet high, and, as a matter of course, considerably less in width. He said too, that in the same field were four other mounds less in size, all of which have now been reduced to the general level. To the best of his recollection three of these were in line nearly from east to west, and the fourth one was a little to the north of the westernmost of these three. After having thoroughly examined the large mound we sounded many places over the field to find if possible where the others had been, but in vain.

As it was the desire of Mr. Miller that the large mound should be removed, it was not necessary to bestow any care, or lose any time in preserving its appearance by restoration. Every foot of it therefore was turned over, and carefully examined. Two trenches, each three feet wide, were cut at right angles through the middle, after which, each quarter was examined in detail. The structure of this mound was peculiar, consisting of brown, black and yellow earth in small masses and thin layers, with which were intermingled at intervals of from four to six inches, thin and irregularly laid beds of what looked like white marl. It is probable that this material, or what has formed it, was placed here evenly, and that the arrangement has become disturbed by the subsidence of the earthwork.* Figure 3 shows the appearance of a section of the mound, as drawn from a photograph by Dr. Harrison, and from a sketch made on the spot.

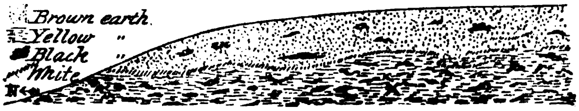


FIG. 3. Section of Miller Mound, No. 2.

Within the first two hours' digging, one of the men came upon a human skeleton much decayed, except only the leg-bones, and some of the vertebræ.† It was impossible to tell how this body had been buried, but really it does not appear to be of much consequence to note the positions in which bodies were placed, otherwise than to show that no rule was followed, either by the mound-builders, or by those who made the intrusive burials.

Among the mouldered ribs was what we may suppose to have been a gorget made from some large sea-shell. This specimen rudely represents a turtle, the hinder portion of which is missing. A rough fracture encouraged the hope that the missing portion had either been previously thrown out, or would yet be found, but although two or three tons of earth were carefully sifted, the piece was not discovered, and the conclusion was arrived at that the gorget had been deposited here just as we found it. As far as I am aware, the specimen is unique, both in shape, and in the style of what by courtesy may be termed the engraving that appears on its convex side. See figure following. Near the same spot were found two small and roughly made celts. Two days' subsequent digging yielded nothing but three bone harpoons.

---

*Samples of this and the other materials of the mound are now in the museum.

†These remains were found at the spot marked X on figure 3.

As it did not seem probable that so large a heap was raised merely to cover a single body, or to commemorate its burial, more especially when the remains were found about mid-way between the centre of the mound and its edge, and were necessarily still nearer the edge before the place was cultivated, various test-holes were dug below the general level to a depth of two feet, without finding traces of disturbance, until we reached the very centre where were discovered evidences of fire, five feet below the crown of the mound as we found it, or fully eight under its original summit. There is no doubt that the remains were those of a burial contemporaneous with the building of the mound, but there seems to be no reason why the body should have been placed where it was.

Having failed as already mentioned to determine the situation of the other mounds mentioned by Squire Thomson, a pretty thorough examination was made of the shore at the mouth of the Otonabee, three hundred yards away (to the west), for here there was clearly an old camping-ground. By measurement this site was ascertained to be upwards of a thousand feet long, and four hundred feet wide. Beds of ashes and fragments of pottery were numerous, bnt there was an entire absence of flint. It is probable that these signs marked an occupation by people of more recent date than that of those who constructed the mounds, and it is also likely that the place was resorted to only during the harvest-time of the wild rice, which would account for the abundance of pottery, as large clay vessels were necessary in the parching operation, by means of which the chaff or hull was removed from the seeds. At such times, too, large quantities of rice would be consumed, and numerous pots must have been employed in cooking. During the rice-harvest flints would not be in much request, and this was not a suitable place, even for their manufacture.

CAMERON'S POINT.

On Cameron's Point, a high bluff on the north side of Rice Lake and at its eastern end, are three mounds, portions of two of which have fallen over the face of the cliff, which, some forty or fifty feet high at this point, is gradually giving way. The most westerly one, however, standing a little further back, is yet uninjured in this way. The appearance of these mounds was not at all inviting, on account of the large stones that marked their surfaces, and seemed to indicate their general construction.

Some of the farmers in the neighborhood assert that there is among the Indians a tradition to the effect that a huge snake once appeared to a party of them on this hill and devoured them all, but Pashageezhik assures me that having made inquiry, at my request, on this point, he found no Indian who ever heard the story.

A little east of the mounds, and now close to the edge of the cliff, there is a quantity of mussel shells, forming a bed from one to ten inches in thickness, and seventy-five feet in length. That these were brought here in connection with food purposes there cannot be a doubt, and the Indians of the Alnwick Reserve across the lake explain the presence of so many shells by stating that on one occasion their people would have died of famine but for the plentiful supply of mussels. However this may have been, there are the shells, pointing to an unusually large, or long-continued, consumption of this kind of food.

During my absence at the examination of an ossuary in Beverly, and in looking over the ground in the " Happy Vallev," the work of opening these mounds (with the cordial consent of Mr. Adam Humphrey, the proprietor), was under the care of Mr. W. G. Long, whose experience in connection with similar work in Manitoba and Dakota proved very advantageous. He reports as follows:—

" Cameron's Point is situated on the northern shore of the eastern end of Rice Lake, near the outlet of the lake into the Trent River, and about a mile west of the River Ouse. It is about twenty feet above the lake, about one and a half miles in length, and sloping upward to the north for about half a mile or so, finally forms the steep side of a narrow valley. This point has a commanding view of the Trent River on the east, and of the lake and islands to the west and south, and the bay running to the north. At this place, and on the very edge of the bank, are three mounds—two of them at one time may have been connected, but owing to the washing away of the bank, and the levelling down with the plough, it is impossible to trace the connecting link. However, the two together, notwithstanding their dilapidated condition, bear a more or less resemblance to the Great Serpent Mound at Mizang's Point.

" By way of distinction I have named these mounds, A, B, C.

" A.—This mound lies at the western end of the point, and is seventy feet long, eighteen feet wide, and four feet high. Two cross-sections at right angles to each other were made. The soil shewed every indication of having been disturbed. This mound contained five skeletons, four of which were intrusive and were from four inches to two feet below the surface. These remains were in a very poor condition. The skulls were all broken by the weight of stone arranged around and over them.

" The mound builder was on the bottom of the mound in a bent position, reclining on its side, on a bed of sand, surrounded by a circle of stone. Slight traces of fire were seen on some of the stones, but none whatever on the bones.

" The only relic obtained was a flat piece of wood, parts of which on being exposed to the air, crumbled into dust.

" B is twenty feet east of, and a little to the south of A, and is sixty-six feet long, twenty feet wide, and four and a half feet high.

" Two cross-sections and one lengthwise, meeting the two cross-sections were put through this mound. Here, as in A, the soil was mixed and consisted of clay and gravel, but contained a greater quantity of stone.

"On entering this mound to the depth of two feet the spade exposed flat stones, and as the cut was extended to and over the crest, round ones were brought to view. After making the other cross-section, it was discovered that these stones had been carefully arranged over the entire mound. The flat stones were resting on their edge and were in rows, wherever the size of the stones permitted, the round ones also in rows began at the angle and ended at the angle on the opposite side. It was noticed that in a few places two, if not three, rows of stone had bean laid on the top of the mound.

"While cutting through the crest at the eastern end of the mound, ten intrusive skeletons were found lying above the wall of stone, but encircled and covered with stone, that seemed to be entirely free of the wall. With one exception, the skulls were broken or twisted out hape by the pressure of stone lying on and around them.

"On reaching the bottom many large boulders were found. On removing these, two skeletons were brought to light; but were in such a condition that it is impossible to give their position. One skull was wedged in between two boulders with a smaller stone on top of it. However, it seemed a circle had been formed with these boulders, having the vacancies filled in with smaller stone.

"The relics were a small polished, unperforated tablet, and a lump of wood. This wood was found among the stone covering the two mound builders.

"C is ninety-two feet to the east of B, and is seventy-five feet long, twenty feet wide, and three and a half feet high.

"Owing to the time at my command, and to the great quantity of stone piled on the western half of this mound, it was impossible to cut through its entire length.

"When working the usual cross-sections, many hundred weight of stone was removed. This stone had been arranged and at about the same depth as mentioned in B. But on removing some eight inches of soil below this wall, another one was found, consisting of large flat stones placed in the form of a hood around the end of the mound. This wall was seen to extend beyond the cross-section made some twenty feet from the end. On removing the stone from near the end of the arc several large boulders were found to form a circle about three feet in diameter. These boulders, and other stones on top and in the crevices, were very much blackened with smoke. When moving one of these, several splinters fell off, which no doubt proves it had been subjected to great heat.

"Making a wider cut, and clearing away the debris, the charred remains of one body was found in this circle of stone. After removing the remains and digging within the circle, ashes and charred wood to the depth of three inches were discovered.

"On examining the flat stones taken from the arch, or hood and directly over the smoked circle of stone, not the slightest trace of smoke was to be seen on them. This seems to prove that this wall and arch had been built some time after the burning or sacrifice had taken place.

"This mound produced three skeletons, two of which were intrusive, and were twelve and eighteen inches below the surface. No relics were obtained.

"This point of land seems to have been a permanent home, or at least a favorite camping ground of the Indians. Many tons of mussel shells and fish bones are scattered over the surface and in beds. One of these, on being dug into, proved to be three feet deep and consisted entirely of shells and bone. The surface in many places contains a large quantity of broken pottery, arrow-heads and fragments of implements.

BIRDSALL'S BAY.

"Finishing my work at Cameron's Point, and on information obtained from Mr. F. Birdsall, I went to a point of land forming the eastern side of Birdsall's Bay.

"Here were found traces of Indian and French occupation. Many fragments of pottery, pipes, and arrow-heads were found. The writer, while walking on a large sand-bar lying between the bay and a large swamp to the north, had the good fortune to find imbedded in the sand a huge boulder, on which a polished surface had been worn, no doubt, by the Indians, in sharpening or polishing their implements of peace and war. Near this stone was another, which on being unearthed proved to be a valuable specimen and an unusual type of mealing-stone, now in the provincial museum by the kind permission of Mr. Birdsall."

SUGAR ISLAND.

Some mounds on Sugar Island were next visited. This island lies a mile or so east of Mizang's Point, and near the mouth of Indian River. It is estimated to contain about a hundred acres. Near the west end, and on the southern slope, are several small mounds, indistinguishable from gravel knolls.

Having instructed Mr. Long to open these mounds, should the examination at Cameron's Point have been completed before my return, the work was well begun when I reached Sugar Island, but up to that time little had been met with to encourage the task, beyond a few skeletons, and a certainty that the mounds were of man's construction. The largest one (afterwards referred to by a newspaper man as the "Princess Mound"), was almost circular, thirty-eight feet in diameter, and four feet seven inches high.

A small mound about a hundred yards north-east of the Princess Mound had been partly examined the previous day, and in it were found a broken gorget, and remains connected with two intrusive burials. The gorget is apparently of the same material as the very beautiful one afterwards found in the Princess Mound. This mound was on the hillside, and so flat on the top that it presented no face towards the north, and resembled an almost circular step thirty-one feet long, and three feet ten inches high, with its convex side to the south. A further examination of this singular looking earthwork brought to light, near the east end, a skeleton half sitting, but leaning on its right side, with its head to the south-west, the arms being doubled up so that the chin rested on the hands. Round the wrists were a pair of copper-bead bracelets, the beads being exactly like those of the copper necklace in the Princess Mound, but somewhat smaller in size. The verdigris from these had stained the lower jaw a bright green along the whole of the right side, which was undermost. If it be admissible to judge from the prominence of the glabella and the lowness of the supra-orbital ridges, and of the cheek bones, this is the skull of a woman. It possesses a large " Inca bone," and is remarkable also in having an extra bone at the frontal fontenelle. At the western end of the mound, and unconnected with any bones, was a small stone adze of a pale bluish-gray color, quite unlike any other specimen in our collection. With this exception and that of the beads found with the remains, nothing else came from this curiously-formed mound.

The body was resting in, rather than on, a bed of stiff clay and sand, evidently prepared for its reception, nearly four feet below the upper level. It is perhaps on account of this clay bed that most of the bones were well preserved, and as it did not extend more than a foot beyond the remains, and no higher than the thigh bone, the idea was suggested that the body had been thus supported in a sitting position until the mound was heaped over it, for there could scarcely be a doubt that it was as a monument to it that the mound was constructed. Although stones are plentiful all about, care was taken to keep them out of this work, only a few small ones having been allowed to mix with the earth.

The "Princess" mound was almost perfectly circular, measuring thirty-eight feet in diameter, and a little over four and a half feet high. It was similar in structure to the other, but stones, within a foot of the surface, were more numerous.

Seven comparatively recent burials had been made here—two on the south side, with a few stones around and over them, and five on the north-east side. In all these cases it was plain that the bodies were introduced. No relics were found associated with them. On nearing the centre of the mound, and three feet, four inches from the surface a skull was exposed, and, as this appeared to be that of the monument's rightful owner, great care was exercised in laying it, and all the bones connected with it, bare. The position corresponded in some degree with that of the skeleton in the more northerly structure, the body being half seated, and facing eastwards. The legs were drawn up behind, the heels being not more than ten or twelve inches from the hips. The hands were on the breast, about eight inches below the chin. Nearly half of this skeleton was in a fairly sound condition, but scarcely a single bone was perfect. The skull was secured in a tolerably good state of preservation, the under jaw especially so, which is unusual. Most of the lower teeth are in place, but all the upper ones are gone. No doubt the excellent condition of the lower jaw is owing to the oxyd it has absorbed from a triple string of copper beads about the neck, and which have imparted a rich green color also to the base of the skull.

Before attempting to remove the beads, attention was paid to their arrangement round the neck. On removing the earth it was seen that besides those of copper, there were two other necklaces of shell. Owing to the subsidence of the earth, and consequent displacement of the bones, there was some difficulty in ascertaining the arrangement, but here and there small masses held together, from which it appeared that there were first, three strings of copper beads; under these, two of small ocean shells (*marginella conoidalis*), and still lower three strings of disc-beads, made from some larger shell, probably a bivalve. The numbers were respectively, three hundred and fifty, three hundred, and eight hundred and sixty-five, a total of fifteen hundred and fifteen beads.

Outside of the right arm and within three inches of the breast were a very perfect stone tablet, and a little beyond it, a copper axe, or heavy chisel, sharpened at both ends. These are fully described and figured elsewhere.

It can scarcely be doubted that the mound was constructed to entomb the body, of which we here had the remains; perhaps this interment was also that of a woman, judging from the appearance of the skull.

Lying at the base of the skull were the parts of what was some kind of receptacle, apparently made of bark, and containing hematite in powder. These fragments are now in the museum, and small quantities of the red coloring matter may yet be seen adhering to them. We may infer that the hematite was used as a dance or war paint.

HASTINGS.

On receipt of information from Mr. J. H. Scriver, editor of the "Hastings Star," I examined three mounds on the farm of Mr. John Preston, lot 6, concession 9, of the Township of Asphodel, a little more than a mile below Hastings, and on the left bank of the Trent. These, like most of the other mounds in the district, are situated on high land, and close to the edge of a steep slope, which reaches the river some fifty or sixty feet below. It was the peculiar appearance of the largest one as seen from the river that first attracted Mr. Scriver's attention, and the result of the examination proved creditable to his judgment. Its dimensions were, eighty feet long, twenty-two feet across the base, and three and a half feet high from the level on the north side. The appearance of this mound was scarcely more inviting than that of the mounds on Cameron's Point. The irregular outline of its long crest, and the evidence that it had not long ago borne heavy timber, gave it an appearance of considerable age. With the consent of Mr. Preston a trench was cut across this mound near the middle, which abundantly showed the artificial character of the work, although not a fragment of anything human in origin was found. Further examination, made by opening the mound lengthwise, through the centre, revealed one bed of charcoal a foot below the surface, and another six inches lower, measuring from the crown. At a depth of two feet, and a distance of eight from the west end, was a human skeleton lying on its right side, with the head eastwards, and below this, at intervals of a few inches

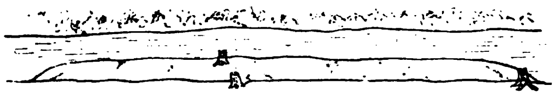


Fig. 4. Hastings Mound (looking across the Trent).

to the base of the mound were traces of fire. As the work proceeded in an easterly direction, numerous skeletons appeared in various positions, and all within two feet of the surface. Near the eastern end, and three feet below the crown of the mound, the earth was burnt over an area of about fifty square feet, and six or eight inches below this lay another skeleton, the skull of which has been preserved. Most of the other bones were decayed. No relics of any kind were found beside any of the remains, all of which, indeed, except the last mentioned, being apparently connected with intrusive burials.

In a small mound eighty feet farther east there were a few traces of human bones, all within a foot. or a foot and a half of the surface, but in another one, sixty-five feet west, the conditions were quite unusual. This was an oval structure, nineteen feet from east to west, fifteen feet from north to south, and not more than two feet high. Near the middle, and only the depth of the shovel from the surface, we came upon burnt earth and charcoal, and about eight inches lower, or nearly eighteen from the surface, were charred, human leg and rib-bones, in a bed of ashes, the evidence appearing tolerably plain that the body had been burnt, but whether when alive, or after death, there was nothing to show. Below this, a bed of extremely hard clay, from four to six inches in thickness, extended from edge to edge of the mound. In many places this clay looked as if it had been hardened by heat, for it formed a mass so compact that it had to be removed with the pick, which brought it away in small, sharply angular masses. In the course of removing this layer there were exposed the bones of seventeen persons, some of them underlying others to a depth of four feet, or two feet below the outside level. There was no apparent arrangement in the placing of these, and the earth-heap seemed to be a combination of mound and ossuary.

In neither of the smaller mounds was there a particle of human workmanship apart from the construction of the mounds themselves, and the large one was almost equally barren, for with the exception of an arrow-head and a fragment of pottery, both found near the surface, the only object was an irregularly formed pendant-like object of fine sandstone, about two and a half inches long, and perforated at one end. See figure following.

In the search for mounds some time was lost owing to information that they were to be seen here and there at intervals of many miles, but when the places were reached the so-called mounds turned out to be either gravel knolls or *deep hollows* of natural formation! Two large, ossuary-looking pits were examined on the farm of Mr. James Miller—the same gentleman who owns the farm on which are the mounds, at the mouth of the Otonabee. These pits are situated on high lands near Lang, and although there are reports to the effect that skeletons have been dug from one of them, they appear rather, to be sink-holes. Reference to others of this kind will be made elsewhere.

Between Peterboro' and Lakefield, too, a cursory examination was made, but before anything can be said definitely regarding this district much more time would have to be devoted to the task. Probabilities, however, do not favor the existence of mounds here, for, if we may be guided by the situation of those already examined, we need look for them only along the lake shore, and, perhaps, in the valley of the Otonabee. It is scarcely rash to venture this remark, for it is almost certain that had anything of the kind existed elsewhere, the discovery would have been made by farmers who undertook to plough down the elevations, and so far, no such information has come to hand.

Next season a further search should be made on both banks of the river, and on the south shore of Rice Lake, for, although there is no record pointing to their existence in either locality, it is worth while to be able to state the extent and limits of the territory with some degree of certainty.

GORE ISLAND EXCAVATION.

On an island north of Gore's Landing there was said to be a curiously constructed earthwork. Some declared that it was of Indian origin, while others with equal assurance stated that it was not.

Guided by Mr. Reginald Drayton, and accompanied by Mr. A. F. Hunter, it was found on reaching the spot, that the work in question consists of a rectangular excavation thirty-six by twenty-four feet in diameter, the bank along the sides of which was formed by the earth thrown out of the pit. The bank varies from nine to seventeen feet in breadth across the base, and stands a little more than three feet above the outside level, the depth of the hole being eight feet from the top of the bank. As everything connected with this excavation bore proof that it was done by some white man, the only reason for referring to it here is to correct the belief entertained by those who have attributed the work to Indians. Mr. Hunter and myself were afterwards assured, on what we thought good authority, that some whimsically disposed old settler once resolved to build himself a house on this spot, but the idea was for some reason abandoned after the cellar was dug.

OTHER ISLANDS IN RICE LAKE.

On account of numerous vague reports regarding the existence of mounds, and graves on the other islands in Rice Lake, I examined all those lying east of Hiawatha, (except Spook Island) and one between Hiawatha and Gore's Landing.

Margaret's Island* near the east end of the lake, and Ferguson's Island showed no evidences of mound-builders' work. On the latter what was supposed to be a mound proved to be a bank of natural formation. It is needless to say, however, that on these and all the other islands afterwards visited there were found traces of comparatively recent Indian occupation. Ferguson's Island is reputed to possess a large mound, but on reaching the spot it turned out to be a gravel ridge of natural deposition.

Farther west and near to the north shore are two islands known as Foley's—Upper and Lower. On the south side and near the east end of the upper island were several shallow pits from twenty to fifty feet apart, three to four wide. and about a foot deep. These pits correspond exactly with others mentioned in former reports as existing on the hillside at Parry Sound, on the Wood and McCoomb farms in London Township, and in the township of Bexley, Victoria County. Some of a like appearance were seen this season near Coboconk, and are mentioned elsewhere in this report. Unless, as has been surmised, they were corn-caches, it is difficult to account for them.[*]

---

* "John McIntosh and his daughter Margaret perished, as was believed, by breaking through the ice, in attempting to cross [Rice Lake]. His body was found during the following spring in Foley's bay, and hers further down at a point of land since called Margaret's Island." Poole's History of Peterboro', p. 135, Peterboro', 1867.

This event, which has given rise to the name of the island, probably happened about 1830.

On the west side of Foley's Point (on the adjoining mainland) is an old village site which was thoroughly examined. but where nothing was found, but fragmentary pottery and flakes of flint.

All the islands in Rice Lake consist of boulder clay and gravel, as do also both shores of the lake, which, indeed, seems to be but a large glacial groove about twenty miles long, and from two to three and a half, or four miles wide, and perhaps in but few places as much as fifty feet in depth. Hundreds of acres of its surface are covered with wild rice, and it has thus been always a favorite resort for water-fowl. Fish, too. were formerly abundant, and no doubt deer and other large game were plentiful. As the Indians also used (and still use) the rice, it will be seen that all the conditions of primitive life in the neighborhood were extremely favorable. Add to this the fact that the lake formed an important link in one of the two great canoe routes between the upper lakes and the St. Lawrence, and more especially between the Huron country and Lake Ontario, and we have another reason for this having been a desirable Indian resort. That it was so during the historic period we know, but for how long anterior to this no one can say, for the construction of the mounds cannot be attributed to any people with whom Europeans have come into contact. It is not recorded that the Huron-Iroquois were mound-builders, and we must therefore regard the earthworks in question as the product of a people who preceded them. Indians they were, undoubtedly, but Indians of different tastes and habits from the Huron-Iroquois, as well as from any members of Algonkin stock met by the white man in this part of America. The mound-building custom is of itself almost sufficient proof to this effect, but when we consider that none of the mounds examined yielded a trace of pottery,[†] a flake of flint, or a pipe of any kind, we are warranted in concluding either that those who built the mounds did not use articles of these kinds, or, if they did, that they refrained from depositing them with the dead, and in either case there is a strongly marked distinction between them and their successors, who, although they did not invariably place offerings in graves, when they did do so, usually deposited objects the ghosts of which would prove advantageous to the human ghosts. If a similar post-obit economical idea actuated the minds of our Ontario mound-builders, the grave offerings would serve as a key to the disposition and habits of the people, and we might assume that they had no earthenware, did not smoke, were not remarkable as hunters, probably were fishermen, of comparatively settled domicile, fond of personal decoration, and inclined to be peaceful. In some of these conclusions we would probably be wrong.

---

[*] Hennepin, Lafitan, Loskiel, Morgan, and others refer to small pits not only as places of deposit for grain, but for cured venison and other meats. It is also stated that the holes were lined with bark only for corn, but when meat was placed in them they had an additional lining of skins.

Since the above went to press I have met with a passage in the "Diary of David Zeisberger, a Moravian Missionary among the Indians." which seems so clear, that no room remains for any longer doubting that such pits were what we have so long supposed them to be.

Zeisberger founded a mission at the place since known as Moravian Town on the Thames, in 1792, but the quotation dates when he was on the Clinton River, Michigan, July 23, 1782. "We found many traces that an Indian town must have stood on this place, for we saw many holes in the ground, which were now indeed filled up, but quite recognizable, in which the Indians have even now the custom of keeping their corn and other property. We could also see quite plainly the little hills where corn had been planted, but where now is a dense wood of trees, two to six feet in diameter." page 105, Vol. I., Cincinnati. Robert Clarke & Co., 1885.

[†] Fragments mentioned as having been found near the surface have no weight in this connection.

If there be anything in the usually accepted belief that the purpose of placing objects in the grave was to supply spiritual needs, then the souls of our Ontario mound-builders were but poorly provided for,—a few simple appliances of horn and bone, a heavy copper tool of no use in warfare or in the chase, and a celt or two—all the rest being purely of a decorative or ornamental character, consisting of copper and shell beads, and gorgets of shell and stone! This in Western phraseology, was "a mighty poor outfit" to carry on business in the Beyond, and it seems more reasonable to regard the mortuary specimens rather in the light of tokens of respect by the living to the dead, or as having been placed with the bodies as their personal property during lifetime, and which it would be "unlawful" to retain, or for others to appropriate; just as it was supposed to be in the matter of personal names, which were forbidden by some even to be uttered after the death of the persons so designated.

However this may be, there is a difficulty in accepting the belief that all our aborigines were actuated by motives of convenience to the souls of the departed when articles were deposited in the graves. The testimony of ossuaries and single graves as well as of mounds is opposed to this view. Had this been a general superstition, the corresponding practice would have been equally general. We may easily understand the case of an individual, who, in the respect of his fellows, was "so poor that none would do him reverence," but what is to be said regarding that of one over whose remains many days of toil were expended by scores, perhaps by hundreds of his people to construct an immense heap of earth, in which has not been placed a single effective weapon, or even a single ornament for his or her use or gratification in the spirit-land? And what of the great pits so laboriously dug to contain the bones of as many as a thousand persons, without an arrow-head, without a pipe, without a pot, or without a scrap of anything to cheer the forlorn ghosts? Surely with a belief said to have been so common, there could not have been such an extraordinary omission. The truth is that we are yet in the dark regarding the philosophy of aboriginal burials, and, perhaps will ever remain so. It would almost appear from what knowledge is now in our possession that objects were at first placed in the graves because they were owned by the persons buried, or as marks of respect in some cases by the mourners; that even this practice was not universal, or at least not invariable; and that as the people imbibed the idea of a Great Spirit and of a future life from their intercourse with Europeans, so they elaborated the Happy Hunting Grounds, making them instinct with ghost-game life for the sustenance of departed braves in a similar condition of being, who would therefore require the shades of weapons and utensils to maintain an existence. Nor is such confusion of thought in simple minds to be wondered at. It is always difficult to disentangle the material from the spiritual, as even our own modes of thought and expression sufficiently testify when we speak of the "great white throne," "the wings of angels," "pearly gates," crowns and harps of gold, and the occupations of the blessed; and as the satisfying of hunger was always a prime consideration with the Indian, we are at no loss to perceive why he should associate the supply of food with supreme happiness. Still, time is required for the birth and development of such ideas. At first they would be adopted by individuals, families, clans and tribes, and perhaps in this order, but not by all at the same time, nor by some at any time, hence the divergences of practice we observe.

The examination of these mounds tended also to confirm a suspicion which has been held for some years regarding the origin of a class of stone relics found in Ontario, but not over plentifully. These are of the kind commonly called *Ceremonial*, and consist mainly of articles made from slate, including tubes, "gorgets," "amulets," and "banner stones," no reference to which was made by those Europeans who first met the Indians, or even by those who have subsequently had opportunities to observe the "noble savage" *at home*, during a period when it may be assumed that specimens of the kind in question would still be in use to some extent. The difficulty arises not from any lack of belief in the ability of the Indians, as then known, to produce these, but from how to account for the fact that the existence, and consequently the uses of such specimens, were entirely ignored by writers. They are among the most beautiful articles of stone work we find, and had they been in common use by the Indians of the sixteenth century, must have attracted the attention of the explorers and missionaries. The latter, more especially, would have referred to them had they been employed in the performance of any rites or ceremonies. That no notice of them occurs, the inference is that they had no place in the Indian economy of the time, and must, consequently, be referred to another and an earlier people. It is clear that those who heaped the mounds were an earlier people; it seems equally clear that they fabricated these objects, and although this brings us no nearer to the purposes for which they were made, it does account for the pervading silence relative to them, on the part of writers, who were quick to observe every novelty employed by the Red Man.

I am aware that this view of the case is not without objections. It may be urged for example, that the area over which such relics are found extends far beyond the limits of the mound country as known to us, but it must be admitted that while the mound-builders may have been comparatively stationary in their habits, they probably had to make long journeys in search of certain kinds of food, and to procure material for clothing, indeed, whatever may have been the custom to the south of us, there is scarcely any evidence of permanent abodes on the part of the Ontario Mound-Builders, near the mounds, which if merely memorial in character, may have only been visited periodically by a people whose *habitats* were at considerable distances from the earthworks.

It may be objected too, that our knowledge of Ontario mounds is too scant, and that finding in them a few specimens of the kind mentioned is not sufficient to warrant us in attributing to the moundmen alone this branch of stone work. There is force here, but when it is remembered that all or nearly all the "ceremonial" objects hitherto found have been taken from the surface and not from association with human remains, it will be seen that, at any rate, there is nothing in the objection to favor the view that such relics are the work of Indians during the historic period, and if it be shown that they are not the work of the mound-men, we must look to a folk who were *their* predecessors. It is not denied that some of these beautiful slate relics were in the possession of recent people, who may have found them just as we do, and, finding them, would no doubt prize them highly; it is only here assumed that the Indians as known to history were not the Indians who produced them, and that to an earlier people we must look for the origin of "ceremonial" stones.

Several years ago, a peculiarly contorted enbankment or ridge was brought to the notice of Mr. A. F. Hunter, in the township of Innisfil, within a few miles of Barrie. The identification of the Otonabee Serpent mound revived in his mind the recollection of the Innisfil bank's appearance, and suggested the possibility that it was also an artificial earthwork intended to represent a snake of even huger proportions than the former.

I have twice visited this place, and on the occasion of my return, had trenches cut into the bank to lay bare its construction, but I am unable to state that the results were proof of artificiality. That the configuration of the ridge is most remarkable, must be admitted, and it is quite reasonable to suppose that to the Indians it was suggestive of an enormous snake—it is even not improbable that so regarding it they have here and there eked out the work of nature to complete the figure—indeed there are at least, two places that look very much like such work,.but at no time did anything approaching genuine proof present itself to associate the ridge with human contrivance.

In the following pages a description of this very peculiar ridge, will be found from the pen of Mr. Hunter, who has given considerable time to the examination of it and adjacent banks of a similar kind.

EMBANKED HOLLOWS.

When at Mud Lake (a name given to a part of Chemong Lake), in search of reported mounds, Mr. Daniel Whetung, an intelligent Indian of the Chemong village, took me in his canoe to a place which is said to have been employed by the Ojibwas to conceal the women and children during the times of 'unpleasantness' that were so frequent, if not actually chronic, between these people and the Iroquois. The reputation of the latter among their old foes is not at all an enviable one, for the 'Mohawks,' as the Irequois were frequently called, are said to have been cannibals. They are credited with an especial fondness for children, whom they roasted, and it is affirmed that their practice also was to kill all the men and women, with one exception, from whom information was first gleaned respecting other Ojibwa camps, when he, or she, was also tomahawked. Mohawk itself is an enemy's nickname, meaning man-eater.

It is not at all likely that the Iroquois were pre-eminent in this respect, but the belief that they were, supplies the basis of numerous Ojibwa legends. Whetung headed his canoe for a point on the south shore, close to which is a small island, on which he said there was at one time " a sort of fortified place, like a big bank," no sign of which now remains. The island, or islet rather, is so small as to afford standing room only for two or three hundred men. Landing on the point, a short climb brought us to the highest ground, where, sure enough, we overlooked a large and deep hollow, and here were the women and children concealed, while battle was raging round " the fort " only a few yards off ! Whetung himself regarded the story as an improbable one.

As several similar hollows were afterwards seen, it may be as well to state here that they are simply examples of subsidence, arising from percolation of water from the surface through a gravelly or sandy subsoil, by means of which the loose material is carried off through such underground passages as the water finds and enlarges for itself; with the inevitable result that a depression is formed on the surface as the unsupported soil sinks.

A really marvellous example of this kind occurs at Kirkfield, Victoria County, on the line of the old portage between Simcoe and Balsam lakes. Here the subsidence has taken place in the middle of a hill some eighty or a hundred feet high,* and the result is what may be called a *crater* having a depth of at least forty feet, and the circumference of which cannot be less than a thousand feet, if I may trust wholly to memory.

At Sunderland, in the township of Brock, Ontario county, as I learned through the kindness of Mr. E Richardson, principal of the village school, there is a curious and instructive example of such a depression, or sinkage, rather, which has been utilised by the Indians for some purpose not yet understood by us. This hollow is on the farm of Mr. Jas. Tocher, lot 10 (S. ½) concession 5. It is oval in outline, and is surrounded by a strong embankment, measuring one way two hundred and twenty feet, and the other one hundred and ten feet from outside to outside, the greatest depth within being about nine feet below the top of the bank, which averages from two to three feet above the outside level. As the shorter diameter of the hollow itself, from base to base of the bank is only fifty feet, it will be seen that the bank is here thirty feet wide at its foundation, and in a few places it is even more, in one place reaching forty-two feet.

An examination showed conclusively that the earth has been thrown up by hand, and was probably raised to a height of four or five feet, if we may judge from its present width, for as Mr. Tocher states that the hollow is seldom without a good supply of water, to which cattle have resorted for forty or more years, considerable tramping has produced a very perceptible effect; this all the more so on account of the place being still " in bush," and thus affording shade. Natural solidification, however, must have done much to lower the original height long before the land was occupied.

---

*I have since heard indirectly that Mr. Schreiber, civil engineer on the Trent Valley Canal, estimates the height of this hill (approximately) at eighty feet.

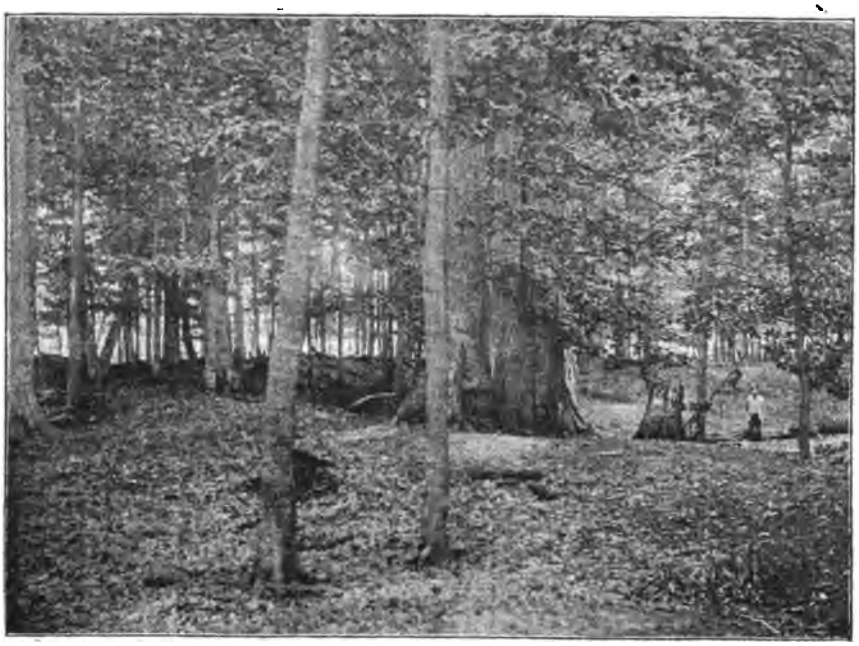


Fig 5.—Tocher's Embanked Hollow, Sunderland.*

As the place is seldom destitute of water now-a-days, the inference is that it formerly held more, a condition that does not add any force to the supposition of some that such hollows were used by the aborigines as dance-circles, or amphitheatres in a small way, unless this is an exceptional case, for it must be admitted that others similarly treated are quite dry at present, whatever they may have been formerly.

Adjoining this hollow is another of smaller dimensions, still in its natural condition, and here we find the explanation of the query that must strike every one who sees this embanked hollow—why was it made oval ?

Where the loose or open nature of the subsoil is conducive to the passage of water, two or more underground channels may be so close that the consequent subsidences meet or run into one another, in which case it is easy to see that the result will be an ovate hollow (or that which is suggestive of one), near to, or in the middle of which is a bar, higher or lower, wider or narrower, in accordance with the extent reached by the sinkage before the channels became clogged. The smaller hollow in the Tocher bush is an example of this kind, and it is necessary only to remove the bar to produce a pit similar in its proportions to those of its embanked neighbor. The inference is that to such conditions are due the form of the larger, enclosed hollow, whatever may have been the purpose for which the work was intended.

---

* From a photograph by M. Andrus, Lindsay, by the courtesy of Mr. Richardson, Teacher, Sunderland.

In a field adjoining the woods was found a beautiful turtle pipe, presented to us by Dr. James McDermott, of Sunderland. See figure following.

On the farm of Mr. Doble (lot 12, concession 5), adjoining the village, and within three-fourths of a mile of the Tocher earthwork, is an Indian village or camp-site, half an acre in extent, on going over which with Mr. Richardson we picked up several fragments of stone tools, and numerous bits of pottery.

In the township of Innisfil, Simcoe county, there are many examples of sinkage, and it is evident that work has been performed on some of them by throwing up a surrounding bank. A good example of this may be seen on the farm of Mr. H. Mayor, lot 22 (N. ½), concession 12. The remains of the embankment are yet visible, notwithstanding repeated efforts to plough it down. As Mr. Mayor remembers this in his boyhood, the pit was about fifteen feet deep, measured from the top of the bank, which was itself five feet high.

In the same field are other depressions, but on none of these has any work been done. On another field belonging to Mr. Fennell, lot 21, concession 13, there is a well-marked example of an earthwork thrown up to encompass one of these pits, but as it and some others will be referred to in detail in Mr. Hunter's paper, nothing further need be said about them here, beyond stating that when in conversation with a well-digger, at Painswick, he informed me that on the south half of lots 19 and 20, concession 13, there are twelve such pits *in a row*, and all of them wide and deep. These, no doubt, overlie a fissure, through which drainage has removed the loose underground material. Questioning him as to the character of the strata he met in his employment, elicited the statement that at depths varying from five to fifteen feet are gravel and sand, which extend to a further depth of from fifteen to upwards of twenty feet, and sometimes as much as forty feet. This reply corresponded with what was anticipated, and the circumstances are mentioned here chiefly to correct wrong local impressions respecting the origin of the many hollows that exist in different parts of the province.*

In connection with the theory that embanked pits or hollows were used for dances or ceremonial purposes of any kind, "open to the public," I am not aware that any authenticated reference exists to this effect. Not long ago I had the pleasure of examining, with Miss Cornelia Horsford, of Cambridge, Massachusetts, two places in the neighborhood of that city. One of these is a circular hollow, the other forms a well-rounded sinus in the face of a low hill, but both are terraced within, as if to afford standing, or sitting room for spectators, an arrangement quite unlike any effected on our artificially treated depressions. In neither of the Massachusetts cases is there an outer embankment.

---

*Mr. Henry Smith, of New Hamburg, wrote regarding a small, grave-like hollow of this kind. After being replied to respecting its probable character, he examined it, and discovered it to be as stated.

SMALL PITS OR CACHES.

Mention has been made, both in this and other reports, of the existence of small pits occurring in rows and groups, usually on some gentle slope. On Foley's Upper Island, in Rice Lake, we found a few of these, corresponding in every respect to others elsewhere, except that they were farther apart—from twenty to fifty feet, while the usual distance is from six to twelve or fifteen feet. On Foley's Island we carefully cleaned out three or four of these holes, removing all previously disturbed soil, and leaving, as nearly as possible, the original face of the excavation. This gave cavities from two to three feet deep, and about the same width, but in no instance was there a trace of anything to indicate the purpose for which they were originally dug. On the supposition that they were for storing corn, it would be almost useless to look for any traces of it, unless it had become carbonized by 'heating' or fermentation, if a sufficient quantity had been left; but whatever the holes were meant to hold, has been removed so completely as to leave no indication of what it was. Indeed, it is probably owing to removals that the pits are now observable.

On the farm of Mr. William Smith, lot 18, Gull River Range, Bexley Township, and within a short distance of Coboconk, there are said to have been at one time twenty-five or more of these pits, but as most of them lay within the area of a a field that has been cultivated for some years, they have disappeared. In the adjoining field, however, there are still twelve of them in a row, eight to nine feet apart, of the usual depth—from ten inches to a foot, and about three feet across, at the surface. Some of these were opened, with the result as in other cases.

Some clearing having been done to cut a road allowance through a new section in Bexley Township, where Mr. G. E. Laidlaw and myself made an examination two or three years ago. the present condition of the ground affords an excellent opportunity to see the position of the numerous pits. On the occasion of another visit to the spot this season, we did not succeed in adding much to our knowledge, beyond being able to see the arrangement of the holes more clearly. Mr. Laidlaw has paid some attention to this ground, and his remarks concerning it will be found in another place.

VILLAGE SITES.

Besides the village or camp sites already mentioned as having been visited at Foley's Point; at the mouth of the Otonabee; near the Old Bay House; on other parts of the Rice Lake north shore; and in Brock; some time was spent on an interesting spot in the township of Bexley, where Mr. G. E. Laidlaw and myself collected a number of good specimens. Clay discs were especially numerous, and fragments of pottery were plentiful.

Another place near Mud Turtle Lake in the Township of Somerville was examined but did not yield much. The same may be said regarding a spot on Corbett's Hill, Bexley, and of another on the farm of Mr. Angus McDonald, lot 45, concession 8, Eldon, near Kirkfield, although from the two places last named, large quantities of relics have been taken in recent years. The marks of occupation on McDonald's farm exist over an area of fully fifty acres.

OSSUARY IN BEVERLY

A son of Mr. Aaron Main (lot 8, concession 5, Beverly), when ploughing last summer, threw out some human bones. Mr. James Hay, teacher, and Mr. Main's sons proceeded to search, but had not done so thoroughly before information reached me. They found a layer of clay, three or four inches thick, above a large quantity of bones, and met with a few bear's teeth, and some fragments of pottery. The bones have been thrown into the pit promiscuously, and formed a deposit nearly two feet in thickness, below which, and resting on 'hardpan' clay, was a shell cup, made from the busycon, by removing the interior portions, and leaving only the outer wall.

On cleaning out this ossuary thoroughly, we found several skeletons still undisturbed, and placed along the bottom edge of the excavation. These were seemingly the bones of persons who had been buried *in the flesh*, as all the parts occupied their proper relative positions. Perhaps these represented the bodies of some who had died about the time the ossuary was dug to receive the bones of those who had died several years before. Nearly all were doubled up, and lying on their right sides. The occurrence was an unusual one in a burial place of this kind.

Some twenty or thirty skulls, most of them in a very imperfect condition, were taken from this place. Most of the good ones are now in the Museum, through the courtesy of Mr. Main, senior; Mr. J. Humphrey, Troy, and Mr. James Hay.

This ossuary was much smaller than others hitherto opened in the township, being only ten feet in diameter, and about two and a half feet in depth, measuring from the general level of the field, which has been under cultivation for eighty years.

Mr. David Main, eighty-two years of age, father of Mr. Aaron Main, says he remembers a ditch the Indians had made to connect a swale that then existed close by, with the neighboring creek. He also asserts that traces of Indian cultivation were numerous in the bush seventy-five years ago, in the shape of old corn-hills.

GRAVE IN SCARBORO.

On the farm of Mr. Jonathan Ashbridge, lot 26, concession B, close to the edge of the precipitous lake bank, here two hundred feet high, a grave was discovered in November. In it were the remains of five persons, four of whom had been buried close to each other, and one a short distance from these. The bones of the latter were found in the ground promiscuously, while those of the others were in natural order.

The single burial was probably that of one who had died long before the others, and whose remains were removed from their original resting-place to lie beside theirs. As some of the bones were not more than a foot below the surface, and none more than two and a half, or three feet, the burials were probably those of Mississaugas, and therefore of comparatively recent date. With the exception of one skull, all the bones were much decayed. Mr. Ashbridge has kindly presented the skull to the Museum.

GRAVES IN WHITCHURCH.

By W. A. Brodie.

The " Old Fort," is noted for its numerous burials and variety of Indian relics. It comprises an area of about thirty acres of the hilly country in the ridges of Whitchurch and is situated on lot 14, fifth and sixth concessions of the township of Whitchurch, county of York. The surface soil is of a sandy or gravelly nature, and the subsoil is clay. It was originally covered with large pines, under the stumps of which are sometimes found graves and Indian relics.

At the southwestern portion of the " Fort " I noticed two hollows about six feet apart, and thinking they were graves, commenced digging. At the depth of about two feet I discovered a skull of a full-grown person, very thin and narrow, the facial portion and lower jaw being wanting. Close to the skull, and in a row running north and south, were found eleven somewhat oval-shaped stones. Tracing the grave westward I noticed many of the bones wanting, the ribs and large bones of the legs being best preserved. The position of the skeleton in the grave would indicate a sitting posture, the bones of the legs being about two feet deeper than the skull, which inclined to the east. This grave also contained a slate tablet and four small peculiarly shaped stones.

The other grave contained three skeletons; two were placed parallel with the former, but a few feet eastward. They were all in a sitting position the heads to the east as in the previous mentioned grave. Two of these skulls were those of adults, well preserved, but the lower jaws were wanting. The third skull was much smaller, and differing from the others, had the lower jaw well preserved. This grave contained two stone axes and three arrow-heads.

In August, 1893, about thirty yards westward, I discovered another grave about one foot deeper than the others. Above the skeleton were several large, flat stones. It was in a sitting posture like those already mentioned, with the head to the east. The lower jaw was wanting. but the skeleton on the whole well preserved. This grave contained a clay pipe very rudely made, and a rough irregularly shaped stone.

Many relics are found over the surface of " The Fort," part of which is being tilled, and yearly exposes new evidences of the old occupation, such as fragments of pottery rudely designed, beads of stone, bone and shell, axes of various sizes, small arrow-heads, stone and clay pipes rudely constructed, awls, needles and bodkins.

BALD HEAD.

This is the extremity of a low sandy spit, which extends in a north-westerly direction, enclosing Weller's Bay, south of the old Carrying Place, between Lake Ontario proper, and the Bay of Quinte. A brief visit paid to this locality showed it to have been a much favored resort of the old-time inhabitants. Within the memory of many residents of the neighborhood, Weller's Bay was one of the best fishing grounds in Canadian fresh waters, and was equally famous for its water-fowl. Even at the present day there are numerous places not nearly so well off in either of these respects.

On the line of travel to and from Rice Lake by way of the Trent, to Indians from the south, Bald Head afforded a very convenient resting-place, before or after making the portage, and as such it was used by them until a comparatively recent date—the proof, if proof be necessary, being found in the mixed character of the material that may be picked up here and there on old camping-grounds along the shore.

For a good many years Mr. Chadd, the enthusiastic local archæologist, has set himself the task of collecting all the relics that are found in the neighborhood, both by means of his own examination and through the finds made by others. The whole of Prince Edward county presents a rich field for archæological work, and it is said that collectors within its limits are numerous, notwithstanding which the collection of Mr. Chadd is admitted to be the largest and best.

On account of the constant changes that take place on the surface of Bald Head owing to the shifting of the sand, it is impossible to select places for examination, otherwise than as these may come to light after a gale.

As this locality is frequently visited by those in search of relics, it is now difficult to procure much, but during the short time spent there in company with Mr. Chadd junior, a small number of shell and glass beads were picked up, the former being made from a small univalve brought from the Atlantic.

With the exception of these beads, the Provincial Museum contains absolutely nothing from the Prince Edward peninsula, nor do we know anything regarding its record of village sites, burial-places, or other localities connected with aboriginal occupation. For this reason it might prove instructive to hear from persons in the county who have given attention to matters of the kind, and it is needless to say that should there be some in possession of specimens they are willing to place in the Provincial Museum, donations will be most gratefully received.

Much of the success attending such work as we performed during the past season depends on the intelligence of the workmen. With one exception, all the men employed at various places were acutely observant, and manifested great interest in their work. In this connection, special recognition of services is due to Messrs. Roach, Kain, Weir and Londreville, of Keene, whose appreciation of details was highly commendable in connection with the examination of the mounds on the mainland and islands of Rice Lake.

NOTES ON SOME SPECIMENS.

Flints.

Flints are of such common occurrence, and have been so often described, that perhaps but little more remains to be said about them, still fantastic forms appear now and again, that let in a little light on the taste and habits of the old workers. In last report on page 54, some specialized forms and sizes were illustrated from among those in our cases, collected by Deh-ka-non-ra-neh, on the Six Nation Reserve, and accompanying cuts (figures 6, 7 and 8) show what some other flints look like from the same neighbourhood, collected by Mr. F. W. Waugh, and presented to us with numerous other articles by that gentleman. Figures 6 and 7 are of convenient size for arrows, but their purpose may have been that of adornment about the person.

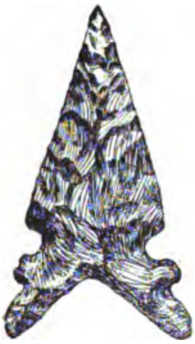


Fig. 6. (Full size.)

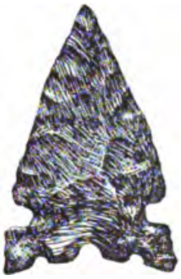


Fig. 7. (Full size.)

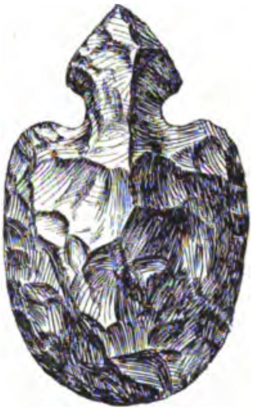


Fig. 8. (Full size.)

Figure 8 is very peculiar. Its symmetry when viewed edgewise, as well as sidewise is almost as perfect as one can imagine it possible to produce with such material. Both ends seem equally well adapted for use, whatever that use may have been.

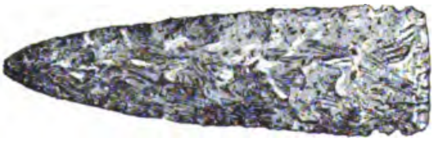


Fig. 9.

Before the tip of this specimen (figure 9) was broken, the tool must have been almost seven inches long. It bears a weathered appearance indicative of considerable age. Inserted in a short handle it would have made an effective knife, and thus used, it may have made many cuts round the crowns of heads, although perhaps, shorter instruments like arrow-heads served such a purpose better. Flints of this size and larger, are commonly either leaf-shaped, or necked at the butt, but here are two very shallow notches on each side, and the base is brought to a thin edge. This specimen is part of the colllection made by Mr. James Cairnduff in Harvey Township, and by him presented to the Museum.

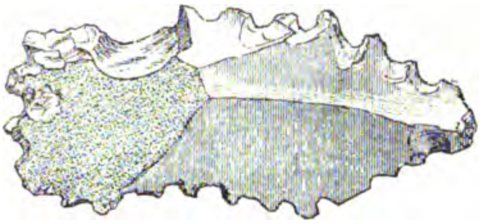


Fig. 10. Full size.

The very peculiar flint figured by No. 10 is from Boone County, Kentucky, and may serve for comparison with serrated specimens found in Ontario. Not only has it been deeply and irregularly notched, but the flake (for such it is) from which it has been made, is so much curved, that when lying on a flat surface, concave side down, the middle is nearly a quarter of an inch higher than the ends. It will also be observed that in this case the notches have been made completely round the flint. We are indebted for this curious specimen to Dr. S. H. Collins, of Lawrenceburg, Indiana.

STONE AXE.

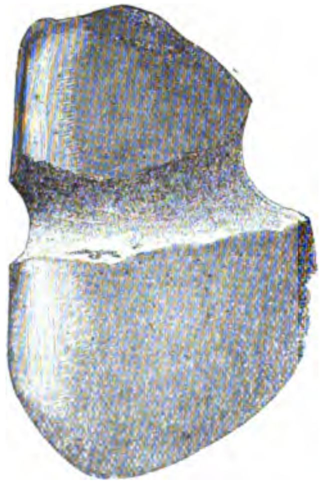


Fig. 11. ⅓ diameter.

Few objects in the Museum present more instructive features than does that here figured. It is an evidence of aboriginal ideas of adaptability. Except that a pretty deep groove has been pecked in it for handle attachment, it is simply a large pebble, and nothing more, but the eye of the savage was quick to perceive its capability as a cutting tool if he could only fasten a handle to it. While not as symmetrical as grooved axes generally are, here was a stone on which nature had done so much work that even a good cutting edge existed just where it ought to be, and this of itself meant a great saving of labor. Or the owner may have considered himself an extremely lucky fellow to own a tool or a weapon, so fashioned by the "spooks," if we may judge of his gratification by that of its present possessors, who have to thank for it, Dr. S. H. Collins, of Lawrenceburg, Indiana.

CLAY PIPES.

These two clay pipes represent two distinct "schools" of Indian art. The general square-like cross section of bowl and stem in figure 12, suggests that it is a modification of a well-known Huron type. The arrangement of the dots, too, along the margin and angles was a favorite one among the Hurons. Deep and roughly triangular depressions have been made that the eyes may stand out, and the latter are very rudely modelled. Although the nose is prominent it falls in towards the point, and the nostrils are marked on the upper lip rather than on the base of the nose itself. The lips, like the eyes, are coarsely made, and perhaps two slight depressions, behind but higher than the eyes, are meant for ears. The lug-like projections on the edge of the bowl are very unusual. What is left of the curve on the stem shows that the pipe-face looked towards the smoker, as was generally the case. This fine specimen was found in the township of Oro, and was presented to us by A. F. Hunter, M. A. of Barrie.

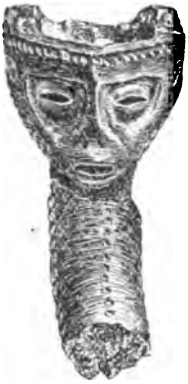


Fig. 12. ½ dia.

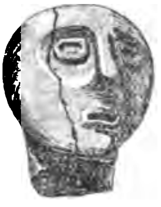


Fig. 13. ½ dia.

Figure 13, is of an advanced style. All the features are well moulded—the nose slightly aquiline, is most prominent at the tip, and the nostrils are neatly marked by means of two very small holes in the proper place. The chin is also well formed, and the general effect of the work is pleasing. This mask (from the middle of the eyes upwards) is higher than the body of the bowl behind. All the stem is gone, but the slight curve remaining on the back of the bowl shows that the stem was in the same direction as in figure 12. From Udora, Brock Township, Ontario County.

STONE PIPES.

That the turtle was held in such high estimation by Indians of the Huron-Iroquois stock, would warrant us in expecting to find numerous representations of the animal in those parts of the province that were occupied by these people, but the truth is that specimens of this kind are extremely rare. Until the present year the museum has contained but one turtle-shaped object of any description—a totem-like specimen—from the township of South Yarmouth, in the county of Elgin.

Dr. James McDermott, of Sunderland, township of Brock, and county of Ontario, placed us in possession of our first stone pipe carved to represent the animal in question. This pipe was found some fifteen years ago in a field, (Mr. John Baker's, lot 11, concession 5) within a few hundred yards of the earthwork elsewhere referred to on Mr. James Tocher's farm, and was given by the finder, to Dr. McDermott. It is made of a white or cream-colored limestone, and is nearly five inches in length, by three and three-eighths in breadth. The proportions are very good and the head is well formed. More labor has been expended on the lower than on the upper side of the specimen, but the latter is evidently in an unfinished condition, as are some other portions of the body. Marks of the tool used in chipping the groove that surrounds the margin on this side may still be seen, and the groove itself seems to be only part of the work necessary to give the back its proper degree of curve, after which the whole surface would no doubt be rendered fully as smooth as a portion of the under side now is, and as it was customary to finish every stone-pipe. Another evidence of the incomplete state of this fine specimen is shown in the drillings that have been made into the body, before and behind each leg. It is plain that these borings have been done, just as any workman would do to-day, for the purpose of removing the bulk of the material between the upper and lower parts of the test, and, at the same time, to bring out more freely the form and attachment of the legs. The holes have been produced by two drills—first, one of three-sixteenths of an inch in diameter has been used to the depth of about a quarter of an inch, followed by another fully twice that size, with which the small holes have been deeply countersunk. The eyes are represented by slight borings made apparently by the smaller of the two drills already mentioned. No attempt has been made to form a tail, and the condition of the feet adds color to the belief that the specimen has been left in an unfinished state, for while the toes are roughly indicated on two extremities, the other two are perfectly plain.

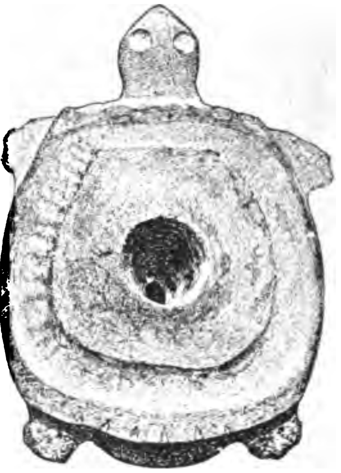


Fig. 14. ½ dia.

There is no evidence to warrant, us in placing Brock Township within the limits of the Huron nation, and yet it is not so far distant from what we call the "Huron country" as is the township of Manvers, where I examined some ossuaries last year. Pipes, however, seem to have found their way to and from widely separated portions of the continent.

Shortly after receiving the turtle stone pipe from Dr. McDermott, we were presented with another of the same type, by Inspector Jas. L. Hughes, of Toronto. Although the latter specimen has suffered some damage to its limbs, it presents features that are absent from the Brock pipe and certainly are intended to represent a different species of turtle. Mr. Hughes' specimen was found in the township of Darlington, county of Durham. It is made from soapstone, a material much more easily worked than limestone, a fact that may in some measure account for the superior manner in which its details are brought out.

Originally, what now represents the upper part of the test, would appear to have been almost circular and, as nearly as possible, three inches in diameter—its present measurement from right to left—but three-eighths of an inch has been removed from the front edge of the test to show the protruding head, on which no eyes are represented. The upper side is quite smooth and almost black, presenting no features worthy of notice, but on the lower side much time and labour have been spent in an endeavor to produce life-like details. In both of our turtle pipes the stem-hole enters the bowl from behind, but as the workman in modelling the Hughes pipe has introduced a tail an inch in length, he has formed this appendage, turned artistically to one side, thus leaving the way clear for the insertion of a wooden stem. The maker, too, has aimed at giving the tail a natural appearance by means of a series of notches, but he has not succeeded in placing them on the right side.

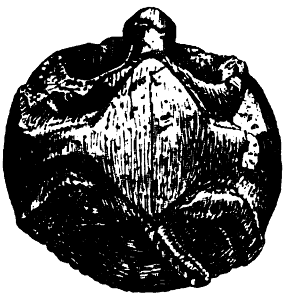


Fig. 15. ½ dia.

When closely examined a faintly scribed line may be seen extending from neck to tail on the under side of the test. This line has no doubt been drawn by the workman to mark the middle of his material, and enable him to produce something symmetrical, which he has managed fairly well. The presence of such a line is suggestive of European 'laying out' rather than of such hap-hazard workmanship as we are prone to attribute to the Indian, and if found on stone pipes only, might tend to confirm this suspicion, for it is certain that in numerous instances these are the work of white men, but in at least one other case, viz., that of a woman's large, semi-circular, slate knife, a tool that no white man was likely to make, there may still be traced the line followed by the artificer in forming the curved edge of the blade.

Both turtle pipes are excellent specimens, and the donors are hereby specially thanked for their gifts.

A soapstone pipe that retains some marks of great former beauty was presented to us by Mr. J. A McIntyre, lot 15, west half, concession A, Otonabee. Originally it has been a fine specimen of the platform or monitor pipe, but long usage, and perhaps, accident, have abridged the proportions of its base, and damaged the shape of its bowl. The stone is a very light gray, of fine texture and appears to have been made with considerable care.

COPPER.

Implements and ornaments of copper are of comparatively rare occurrence in Ontario, and it is not quite clear whether those found within the limits of the province were hammered into shape by their last owners, or procured in exchange, or by spoliation, from northwestern sources. Rough blocks of the native metal, found at wide intervals, would lead us to favor the supposition that the work of the hammerman was performed here in some cases at least, but it is tolerably certain that many of the specimens turned up in Ontario have been procured one way or another from people whose country was in proximity to the native supply, and who, no doubt availed themselves of this advantage, commercially. For ornamental purposes the chief use of copper was for beads and bracelets—so far, we have found nothing in this metal corresponding to tablets, pendants, pipes, tubes, or amulets of any kind—but the axes, chisels, knives, and spear-heads of copper were, in all probability, also more for ornament than use. As cutting tools they were inferior to a flake of flint, for it cannot be too often repeated that the popular notion attributing to the Indian, or, indeed to any one else, the art of tempering copper, is utterly without foundation.

The largest specimen of copper in the museum I procured from the "Princess Mound," on Sugar Island, last August. It was lying near the right side of the skeleton, a little lower than the onyx tablet described in another place. This tool is ten inches long, an inch and five-eighths wide, seven-eighths of an inch thick, and weighs nearly three pounds and a quarter. One side is flat (where it is not slightly concave), and the other side is well rounded, and somewhat wider than the flat side. Both ends have been beaten to a cutting edge, and as a result of the process each is wider at the lip (one of them much more so) than the body of the implement immediately behind. Surface markings indicate that this tool was wrapped in skin, or fur, and not in a fabric, when buried.

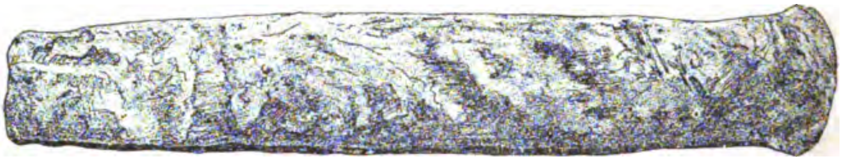


Fig. 16. Copper chisel or adze.

The smaller end bears marks of usage, or perhaps the beating-out has not been completed, but the opposite extremity has a fairly good edge.

As a cutting tool the chief advantage possessed by one of this kind was its weight, as compared with its bulk, and to this may be added, the ease with which it might be sharpened, first by hammering, and subsequently by rubbing.

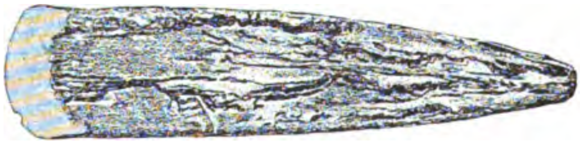


Fig. 17. Copper chisel.

Figure 17 however, represents an implement of copper that had not in its favor, the advantage of weight, for although it is six inches in length, and fully an inch and a quarter in width, it is little more than one fourth of an inch thick and weighs only nine ounces. This handsome chisel was found near Troy (lot 6, con. 2, Beverly Township) by Mr. J. Humphrey, and was kindly presented to the museum by Mrs. Humphrey.

The copper knife here figured has a strong resemblance to one described in a former report, from St. Joseph's Island, near Sault Ste. Marie. This one was received by Mr. G. E. Laidlaw from the finder, who picked it up near Balsam Lake. Its resemblance to a white man's knife is so strong, that one is tempted to suspect that a European was not far away when it was made. It is very thin—less than an eighth of an inch in thickness—and both edges have been sharpened by grinding or rubbing, It bears every appearance of being made from native copper, and not from any worn-out, or disused vessel of this metal supplied by the whites.

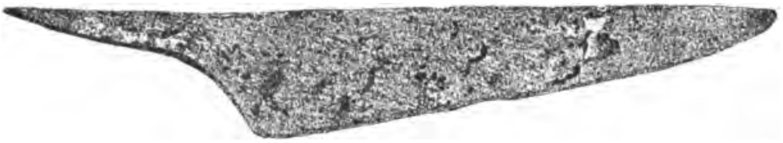


Fig 18. Copper knife, ½ dia.

BEADS.

The copper beads found on Sugar Island are of two kinds—one, similar to those already in our cases from Wolfe Island at the eastern extremity of Lake Ontario; and the other like some from Tidd's Island, opposite Gananoque. Of the latter, which are merely thin bits of metal formed into small tubes from half an inch to an inch long, and a quarter of an inch in diameter, we found only four in the "Princess Mound." Some patches of verdigris showed where there had been a few others. Of the former kind there are upwards of five hundred, averaging three-eighths of an inch in diameter (measured across the hole) and a fourth of an inch in thickness. The edges are rounded. A heavy coating of verdigris prevents us from seeing how the beads were made, but the irregular outline of the holes is sufficient to prove that the material had neither been punched nor drilled, and a very little thought serves to prove how impossible either operation must have been to the old-time workman. A tapering punch driven through one of the beads shows that they are formed of pieces about an inch and a half long, the ends of which were beaten to a thin edge, so that when the metal was bent and the ends made to pass each other, a good splice was the result.

The skill and labor involved in the manipulation of the copper with stone tools, are enough to awaken our wonder, when we consider the number of beads required to make a necklace—in this case upwards of five hundred as already mentioned.

A smaller number found in an adjoining mound were somewhat less in size, but equally well formed,

SHELL GORGET.

Large shell articles of any kind are not among the common finds in Ontario, and although the museum contains a few specimens of round and pear-shaped shell 'gorgets' no sign of engraving appears on any of them. So far as known, no rattlesnake patterns similar to the complicated and highly conventionalized designs found on such objects in some of the southern states, have been discovered in Ontario.

The specimen here figured, I took from a mound on the farm of Mr. James Miller, Otonabee Township, within a few hundred yards of the mouth of the Otonabee River.

It is part of a busycon or some other large shell, and measures nearly eight inches in length by four in breadth. In a rough way, it seems to represent a turtle, the hinder portion of which has been broken off. The incised lines are sharply cut, but the execution is so rough as to show us that no drawing had been made to guide the hand of the graver.

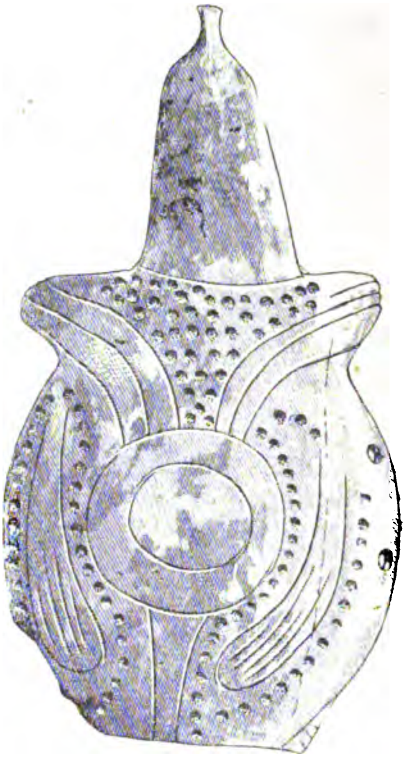


Fig. 19. Engraved shell, ½ diameter.

Perhaps the most instructive lesson deducible from this specimen is to be found in the central part of the design, where we find that the workman has *not* employed any kind of dividers to mark what he intended to be circles. The work has been hurriedly performed—perhaps on purpose to place as an offering with the body buried in this mound—for not only are the lines unsymmetrical in their arrangement, but on the right side it will be noticed that one of the rows of shallow holes has been left incomplete. Several tons of earth were carefully sifted in vain, to find what appeared to be the missing hinder part of the specimen. The conclusion, however, was at last reached that the portion figured was all that had been buried; probably all that ever had been made; that it had been made simply to deposit in the mound, and this supposition receives support from the fact that the suspension holes on the right-hand edge of the body show no signs of the slightest wear.

STONE TABLET.

Among the relics found in what has been called the "Princess Mound," on Sugar Island, is a tablet (Fig. 20) of not uncommon shape, but of rare material in this part of the world. It lay near the breast of the skeleton, about the neck of which were found the copper and shell beads elsewhere referred to. In size, shape, and arrangement of holes, this tablet is almost exactly a counterpart of one presented to the museum some years ago, by Squire McDonnell, of Lindsay, but the material resembles what is known commercially as Mexican onyx—a calcareous stone, richly veined with delicate colors. Long contact with the soil has destroyed the brilliancy of the tints in this specimen, but the veining is still distinct, and some light pink and purple hues may yet be seen. Although more than a fourth of an inch in thickness at the middle, the stone is translucent.

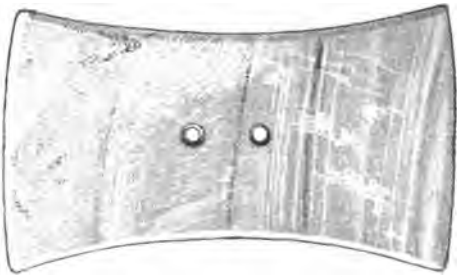


Fig. 20. Onyx Tablet.

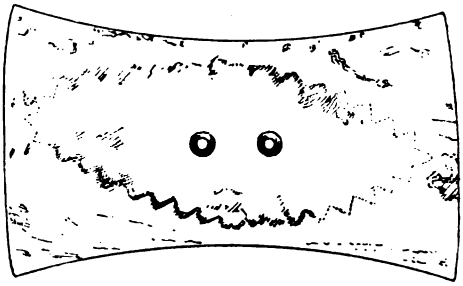


Fig. 21.

One of the sides—that which lay next the body—is almost wholly destitute of color, and is, moreover, considerably corroded. What renders the latter circumstance to be specially regretted is that there are still traceable the remains of an oval pattern bearing a zig-zag, or a crenated outline, enclosing the central holes, as may be seen from the engraving (fig. 21.)

Preston Pendant.

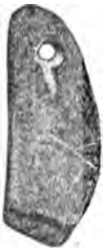


Fig. 22. ½ di.

The pendant-like object here shown (Fig. 22), is quite unlike any thing else in our possession. It is of fine sand stone, 2⅝ inches long, and not more than a fourth of an inch in thickness. Since the hole was drilled, slots have been cut on one edge of it, like those connected with the eye of a common sewing needle. On the side of the specimen not shown here, the slot is less than half the size of the one seen. The opposite end of the specimen is shouldered to half its thickness, but this is apparently the result of an accident rather than of design. The work of rubbing this object into shape is well done.

TRIANGULAR, BLUE GLASS BEAD.

Insignificant looking as is an object whose size is little more than half an inch, and its shape an equilateral triangle, it is not without causes of 'wonderment.' The fact that it is of blue, mottled glass is singular, when it is considered that the Lake Rideau shores (where it was found), have hitherto yielded scarcely a trace of European contact or influence, but such things often travelled a long way in advance of the white man. Still, it is only the material that is of European character—the workmanship is Indian, as may be seen from the hole, which appears to have been picked out (not drilled) with some small and hard silicious point, unless we suppose the shaping of the glass fragment to be wholly the work of some white hunter or trapper, provided with a poor supply of tools. Dr. T. W. Beeman found this odd little ornament at Plum Point, Rideau Lake, Lanark county.

BIRD AMULETS.

The bird amulets illustrated by Figs. 23 and 24 are a desirable addition to our collection.

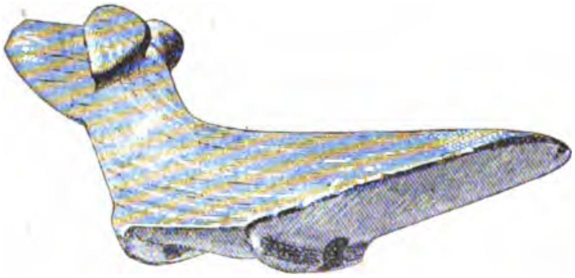


Fig. 23. Five-eighths diameter.

Fig. 23 is a picture of one found near Thedford, Lambton County, a point farther west than is represented by any other similar specimen. It is of brown slate, and has two cross-bars on the base, through each of which a hole is bored. This very good amulet was presented by Mr. Alfred Willson, Toronto.

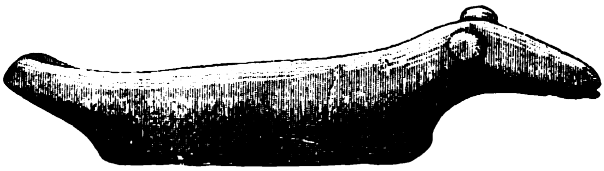


Fig. 24. Half diameter.

Fig. 24 is from the Quinn Farm, Dufferin Street, near Toronto, and was found by Mr. G. Carter, from whom it was procured by Dr. Rear. It is of very elegant form, and is slightly notched along the upper edge from the nose to the tail.

Figure 25 shows a somewhat simple and uncommon form, almost midway between the straight bar-amulet and the highly finished bird-amulet. The head is little more than suggested, and the tail has not had much work expended on it. This is a cast of a specimen found in North Easthope Township, and was presented by Mr. Henry Smith, of New Hamburg.

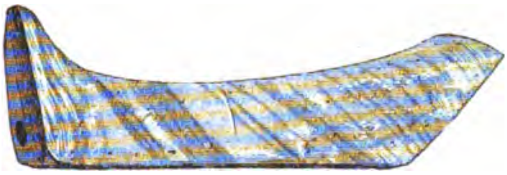


Fig. 25. Half diameter.

SMALL STONE CARVING.

The grotesque little bit of carving in light grey soapstone, illustrated by figure 26, was found by Mr. W. A. Brodie, at the well known "Old Fort" in the township of Whitchurch. Whether it ever had another arm is doubtful. If it had, some one, other than the maker, has jocularly imitated amputation at the shoulder, unless we conclude that it was so made at first to represent a one-armed man. The stump of the broken leg has also been 'doctored' a little. The figure may have had some value as a fetish, but none as an idol, for the Indians recognized none.

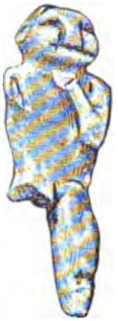


Fig. 26. Full size.

BONE.

The very handsome and quite unique bone scoop or gouge figured here was found by Mr. Albert Monkman, on the farm of Mr. William Roadhouse, lot 22, concession 9, Albion Township, County of Peel. It is fashioned from the lower fore-leg bone of a deer probably, and the workmanship is of such a character as to suggest at least, the use of white man's tools. Even the shape is in advance of the purely Indian, according to our notions of what belongs to Indian art. The triple

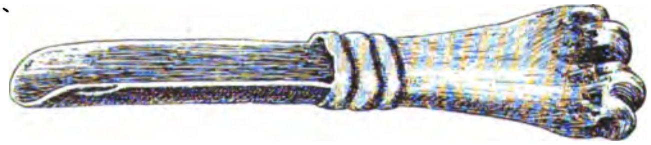


Fig. 27. Bone gouge. Three-quarters diameter.

collar, near the middle, is almost exceptional. On a considerably larger bone, found in the township of York, we have a similar attempt at ornamentation, but the work is not nearly so well done as in the Monkman specimen. Much labor has been expended on the latter in reducing the size of the bone below the joint, so that the working end of the tool might be thin. Some work, too, has been done in smoothing the hollow, but the workman's good taste is shown by leaving untouched the beautiful natural configuration of the joint.

Mr. George Monkman, of Barrie, has kindly placed this specimen with us on deposit.

It is difficult to guess the purpose served by an object like figure 28. The hole extends from end to end, and is roughly oval rather than quadrangular—the form of the outside. It was found on a village site in Brant County by Mr. F. W. Waugh, teacher, a highly observant and enthusiastic student of Canadian archæology, to whom we are indebted for numerous specimens.

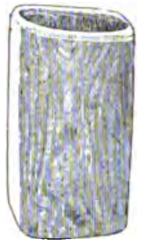


Fig. 28. Half diam.

The bone case represented by figures 29 and 30, is in some respects the most remarkable specimen of this material in the museum. It is, without doubt, made from a large rib—its greatest width is a little over two inches—and has been carefully hollowed to within about half an inch of the smaller end, leaving a wall less than an eighth of an inch in thickness. It is, however, to the working of the simple pattern, that perhaps most interest attaches. The design consists chiefly of double rows of triangular, or, rather, hawk-bill markings, for they are nearly all convex on one side and concave on the other, while the bases (facing each other on the two rows) are nearly straight. On a close scrutiny of this pattern one cannot fail to be struck with its extremely regular irregularity, for, although in only one instance does a line follow almost truly the curve of the bone, yet the markings that form the opposite rows do not vary in distance from each other by a hair's breadth, the result being that there appears to run between the rows a rib of not more than one millimetre in uniform width, as if a gauge of some kind had been employed to guide the tool by means of which the pattern was made. This is especially so on the concave edge,

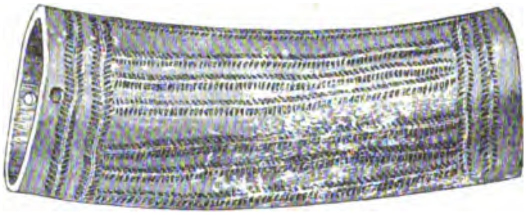


Fig. 29. Bone case. Half diameter.

where the rows of markings, extending from end to end of the specimen, seem to have been made at three different times, or during three attempts, for here there are two breaks in the continuity of the rows.

The presence of holes would lead us to infer that this case was carried on the person, and for other reasons we conclude similarly, for while the flat side is worn so smooth that some of the pattern has almost disappeared; on the opposite and rounded side its lines are quite sharp, except at the top and bottom. This extremely rare bone specimen was found in 1872, on lot 35, Lake Road, west concession (Port Franks), Bosanquet, by Mr. Alfred Willson, C. E., who has kindly presented it to us.

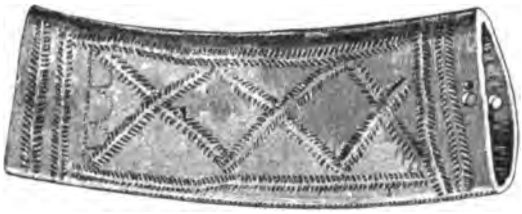


Fig. 30. Bone case. Half diameter.

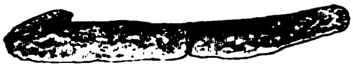


Fig 31. Half diameter.

Fig. 32. Half diameter.

Figures 31 and 32 were probably used as fish-spears. It is said that, as a weapon, the spear was unknown to Indians. From the large mound on Miller's farm.

The arrow-like specimen shown by figure 33 was most likely a scraper or knife. What are called 'women's knives,' of slate, are, in most instances, of this form. The specimen represented by figure 33 is the only one in the museum. This specimen is from the mound mentioned elsewhere, as being situated a little to the east of the farm-house on the Miller farm, near the mouth of the Otonabee.

Fig. 33. Half diameter.

IROQUOIS DANCE-MASK.

Hideous-looking masks, representing man and beast, were worn during the performance of the numerous dances indulged in by the pagan Indians, of whom there are still some hundreds on the Ohswekin Reserve in Brant County. The mask here figured is not a very old one, as it is evidently indebted to steel cutting-tools for its shape, although of purely Indian art. It is made of pine, deeply hollowed to fit over the face, and is supplied with strings to fasten it round the head. Horse hair is the material of the wig. Miss E. Pauline Johnson, the Iroquois poetess and elocutionist, from whom this mask was procured, writes that it was the property of Chief Crow, a celebrated Onondaga, now dead.

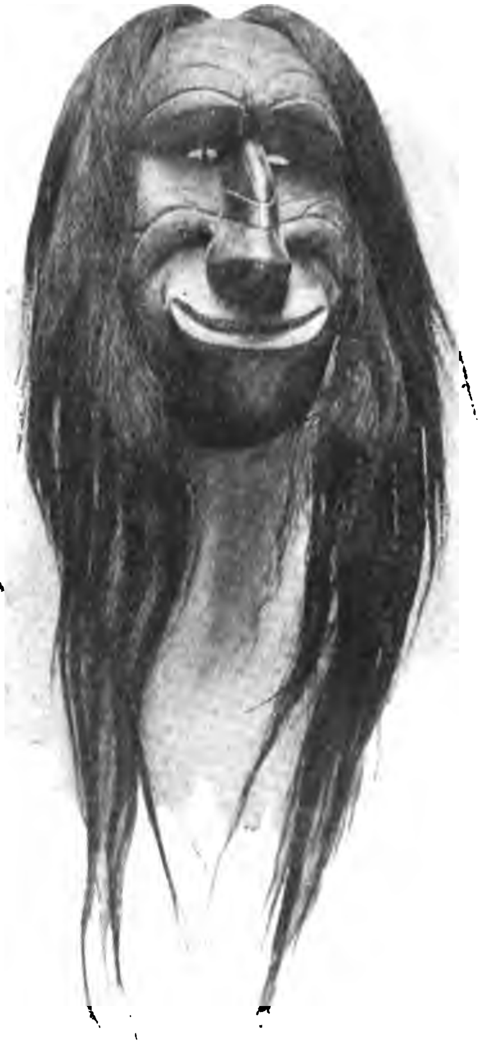


Fig. 34. Iroquois Dance Mask.

CRANIA.

Both of the skulls illustrated here are from Rice Lake mounds, and both are characterized by the presence of the Inca bone, but the

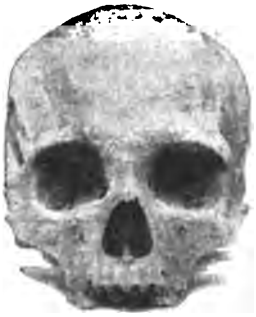


Fig. 35.

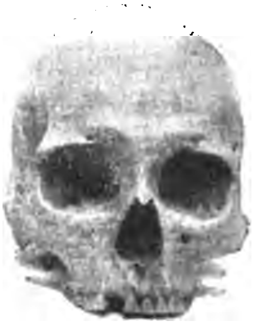


Fig. 39.

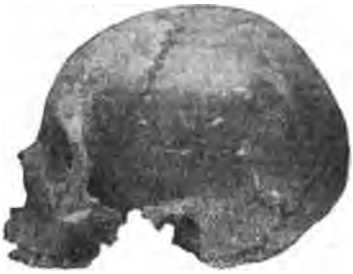


Fig. 36.

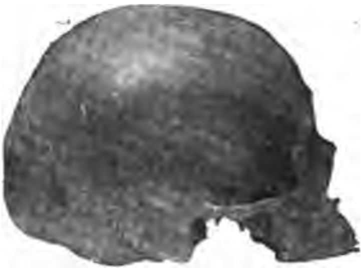


Fig. 40.

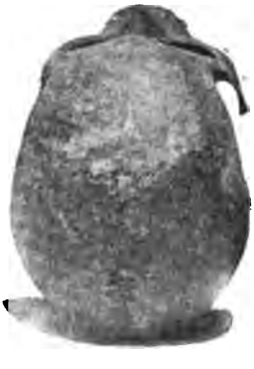


Fig. 37.

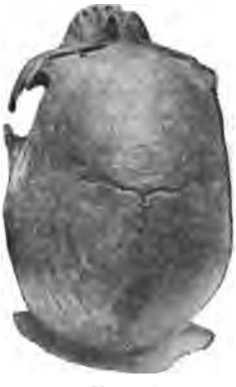


Fig. 41.

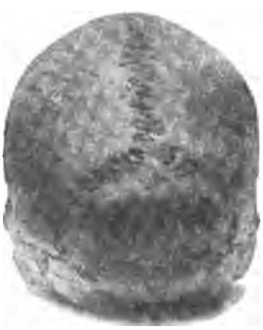


Fig. 38.

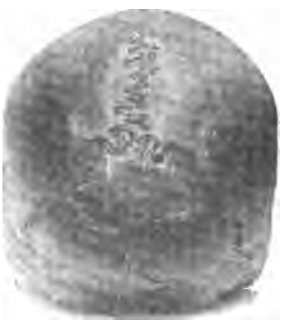


Fig. 42.

one shown by figures 39 to 42 belongs to an intrusive burial, while figures 35 to 38 represent the skull of a mound-maker, if we may judge from the former having been taken from mound D on Mizang's Point, at a depth of little more than a foot from the surface, while the other was found resting at the very base of the mound on Sugar Island, as described on pp. 33-34. Besides the peculiarity referred to, a comparison of the skulls will show numerous marked differences, of interest to the craniologist.

I think I have read somewhere that the percentage of skulls so marked in Europe is highest among those of criminals. There is no apparent reason why the presence of additional sutures should be productive of any effect on the brain, but if it be true that there is such a connection, the inference is warrantable that Indians so marked may have been men who were distinguished among their fellows for deeds of daring—hence, chiefship; for what civilization denounces as vicious, or declares illegal, is usually regarded in simple conditions of society as highly meritorious, or as exhibiting the very perfection of manhood.

THE SCOTTISH PLIGHTING STONE.

One of the rarest archæological objects that has ever found its way from the old to the new world, is the Plighting Stone, or Plichting Stane o' Lairg. Mere rarity, or curiosity, however, is in itself no reason why any space should be allotted to an article in such a collection as ours, but this Stane o' Lairg possesses much that is of instructive and educative value, apart from the fact that it is probably unique in America.

All that is known of it may be told in a few words. Until a comparatively recent date, it was built into a wall connected with the old parish kirk of Lairg, Sutherlandshire. In this position it was known far and wide as a medium, one might almost say, as a sacred medium, for the making of bargains, the pledging of faith, and the plighting of troth. By grasping hands through this stone, the parties to an agreement of any kind bound themselves with the inviolability of a most solemn oath. Did the 'theeker' or thatcher promise to cover the roof of a cottage before Yule, giving his labor in exchange for a ewe, or for two 'gimmers,' here was the final agreement made If a crofter, or wee farmer, desired to 'niffer' a 'stot' with his neighbor for a 'quey,' the bargain was consummated through this stone. In olden times it was to the spot occupied by it that the laird summoned his retainers that a compact might be made to capture all and sundry the 'nowt' of some objectionable chieftain of another clan. Still farther back, the stone has borne witness to many a terribly vengeful oath implying the slaughter of whole families, retribution on the Sassenach, and death to the Danes. Its aid may have been sought in the working of many a spell; it may have seen the performance of numerous incantations, for Sutherland, no doubt, had its full share of witches and warlocks; and the aged person, gifted with second-sight, may have resorted thither to add emphasis to his prediction of coming woes.

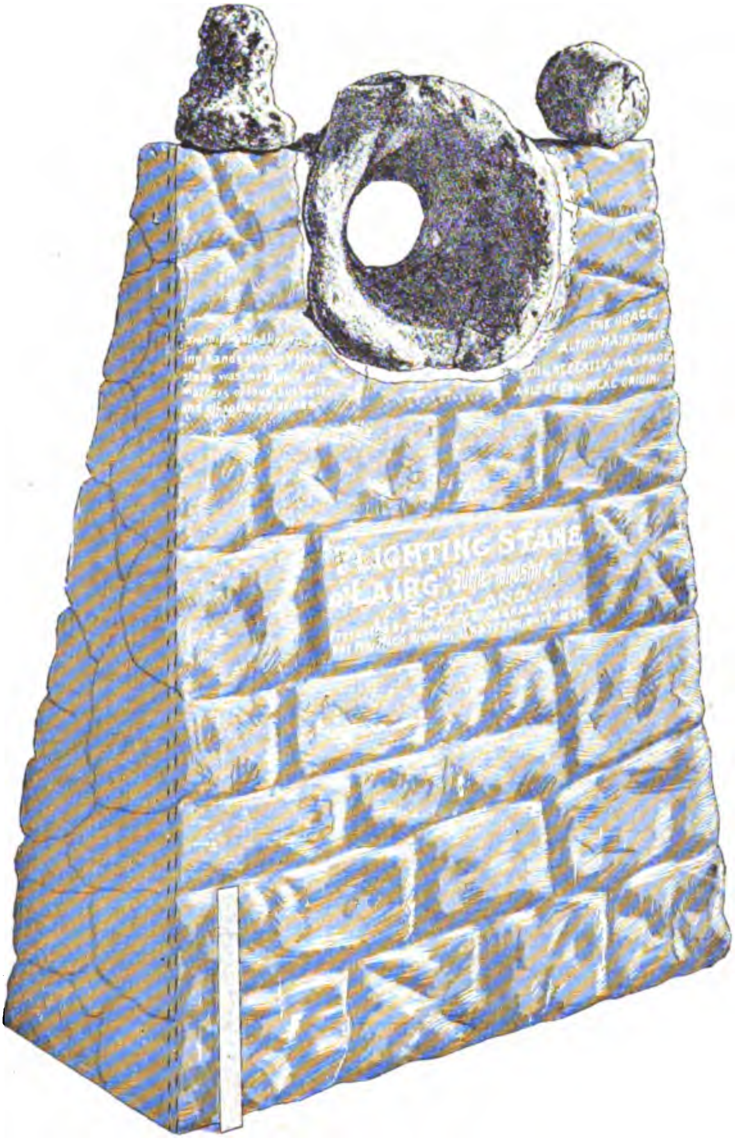


Fig. 43. Plighting Stone mounted in an imitation wall.

But above and beyond all, the Plighting Stone was resorted to by lads and lasses from time immemorial for match-making and matrimonial purposes.

Scottish marriage ceremonies are not necessarily either tedious or intricate, and the clasping of hands through the plighting-stone, in the presence of witnesses, enabled lovers to effect their purpose in an exceedingly simple and inexpensive manner, for surely it was quite 'logical' that if the original troth-plighting by this means was inviolable, the concluding ceremony should be equally so.

Modern manners have probably tended to lessen respect for what was formerly regarded the sanctity of a plighting-stone pledge; but however this may be, ecclesiastical authority did not encourage use and wont in this respect. When, therefore, the walls of the kirk were demolished some years ago, to make way for improvements, the ancient plighting-stone fell from grace as well as from its position in the structure; if, indeed, the former event had not taken place long before. Fortunately the stone was preserved, and kept for many years in the family of Miss Mary Buchanan, by whom, through Mr. Hugh Nichol, of Stratford, it was very generously presented to the Ontario Archæological Museum.

A few other plighting-stones have been known to exist in different parts of Scotland, but all of them have, it is thought, found their way to national and university museums in England as well as Scotland. It is said that for several years the authorities of a celebrated English university endeavored to secure possession of the Stane o' Lairg, and we may be allowed to express the selfish gratification that it has come to us all the way across the Atlantic, rather than to them. Its ancient fame has here become to some extent revived, and not a few young couples have made use of it in old time orthodox fashion!

For the origin of the 'freits,' or superstitions connected with objects of this kind, we shall probably have to go back to the time when they were something to be worshipped; when

> "The heathen in his blindness
> Bowed down to wood and stone,"

for scarcely anything is more certain than that in every part of the world the worship of stones has existed.

"In Western Europe," says Sir John Lubbock, "during the middle ages, we meet with several denunciations of stone-worship, proving its deep hold on the people. Thus 'the worship' of stones was condemned by Theodoric, Archbishop of Canterbury, in the seventh century, and is among the acts of heathenism forbidden by King Edgar in the tenth, and by Cnut in the eleventh century. In a council held at Tours, in A.D. 567, priests were admonished to shut the doors of their churches against all persons worshipping upright stones, and Mahé states that a manuscript record of the proceedings of a council held at Nantes, in the seventh century, makes mention of the stone worship of the Armoricans.

"In Ireland, in the fifth century, King Laoghaire worshipped a stone pillar called Crom-Cruach, which was overthrown by St. Patrick. Another stone at Clogher was worshipped by the Irish under the name of Kermand-Kelstack. There was a sacred stone in Jura round which the people used to move 'deasil,' *i.e.*, sunwise. In some of the Hebrides the people attributed oracular power to a large, black stone.

In the island of Skye, in every district there is to be met with a rude stone consecrated to Gruagach or Apollo. The Rev. Mr. McQueen, of Skye, says that in almost every village the sun, called Grugach, or the Fair-haired, is represented by a rude stone, and he further states that libations of milk were poured on the gruaich stones."

It is true that in most instances of this kind the stones were upright, while our plighting-stone has more of a basin form when lying on either of its flat sides, the hollow, however, being much deeper on one side than on the other. It may have been on, or into some stone of this kind that Mr. McQueen says 'libations of milk were poured.' Be this as it may, it is as already mentioned, probably to some act of worship applied to a stone that we must look for the secondary, or more distantly removed uses of such stones as that of Lairg, which certainly looks as if it had once been a basin, the shallower hollow being suggestive of part of the afterthought which led to the forming of the perforation. Or, it may be that the hole is mainly of natural formation, and this of itself would be sufficient to have made it an object of peculiar regard; indeed, such an occurrence would have proved sufficient for its being set apart as a gruaich. "It's a far cry to Loch Awe," but yet in this connection one cannot help remembering that in the Mahometan Kaaba there was a sacred, black stone, and that Jacob anointed the stone on which he rested at Bethel, not to mention the numerous instances of stone worship that may still be found in America, and other parts of the world.

THE RICE LAKE AND INNISFIL MOUNDS.

BY A. F. HUNTER, M. A.

Having read with interest the annoucement of Mr. Boyle's identification of the Serpent Mound at Mizang's Point in Otonabee Township, I visited this remarkable object on September 3rd. A brief inspection was sufficient to convince me that his identification was the true one. Its artificial origin is quite obvious, because the surface of the ground in the neighbourhood is regular and undisturbed by any glacial agencies. Some question might arise as to whether the zig-zag stretches. which are equal in length, were intended by the builders as the convolutions of a serpent, or were the result of accumulations of burials. This question was soon answered satisfactorily. (1) The head is broadened and the tail is narrowed and ends in a point; (2) the entire mound is easily seen to be homogeneous, having been all made at one time and therefore not the growth of burials made at different times. So that every feature points to the conclusion that a serpent was the design intended to be formed. Fortunately the mound is in a remarkably good state of preservation, and its chief features may be recognized without difficulty.

The serpent appears to have been quite a common idea among mound-building Indians. They often made use of the design in their ornaments, and there are several well-known serpent effigy mounds.

The tradition, among the modern Algonkins at Rice Lake, of a large serpent swallowing some of the former people there is well worth considering in this connection.* Leaving out of view the intrusive burials, it is not unlikely that the burials in the serpent's head were of those punished for disobedience or crime of some kind. Among the Lake Simcoe Indians the form the tradition takes implies punishment. They regard it as a bad end, and to be buried as if being swallowed by a "fiery serpent" certainly could be no honor. "Fiery" is one of the epithets almost inseparable from the serpent in all the legends relating to that animal, and there appears abundant evidence of fire having been used in the burials within the Otonabee serpent. In the story of the fiery serpents destroyiag Laokoön and his two sons we have the eastern form of the same legend.

On the other hand, fire may have been kept burning for some time after the interment as on other burial mounds, instances of which occur even beside the serpent. Some of the Algonkin tribes of the north shore of Georgian Bay followed the practice until recently of keeping up a fire on the grave of a deceased relative for four successive nights after burial. Stones have also been used by modern Algonkins in the construction of graves. just as in this serpent.

Whatever may be the import of these features, the great value of identification of the Rice Lake Serpent Mound to science cannot be overestimated. So far as the archæology of Ontario is concerned, it opens a new field. Hitherto, the identified earthworks of this Province have been only fortifications, and burial mounds of the ordinary tumulus fòrm which exist in a few places along the lake-shores and rivers. But the Otonabee Serpent establishes the fact that other forms were attempted. And the experience of the remaining weeks of the season proved the usefulness of this knowledge.

It should be added that one of the adjoining burial mounds is placed in front of the Serpent so as to have the appearance of an egg—the usual accompaniement of the serpent in aboriginal representations of that animal. In my remarks on the Innisfil Serpent Effigy following this, I have made some observations on the significance if the egg in connection with the serpent.

The relics of the people who built these mounds present many unique features, especially the Inca bone or divided occipital, found in one of the adjoining burial mounds.

At Cameron's Point in Asphodel Township where the Trent River issues from Rice Lake, is another interesting group of burial mounds. Unfortunately, however, Rice Lake has partly destroyed one of these, so that its original appearance is lost. Mr. W. G. Long had been examinging these for a few days previous to my visit to the district. Without having seen the Otonabee Serpent Mound, he suggested that the one partly eaten by the lake had been another serpent mound, and that the part destroyed had been one of the convolutions, as the inner edge is still remaining. After a brief inspection of it on September 4th I concluded that Mr. Long's explanation might be the true one.

---

* **See preceding page where this statement is corrected.**

Its length is 138 feet. Some of the considerations that suggest this interpretation of the mound are:—

(1) The burials are situated in it just as in the Otonabee Serpent Mound, viz., in, (*a*) the head or expanded end of each, and (*b*) another expansion toward the tail or small end, which, however, had probably been intrusive in both cases.

(2) This expansion whether intrusive or not, is similarly situated in both.

(3) The general direction of both mounds is east and west, the heads being the easterly ends.

(4) Both face other oval burial mounds at the east of them, suggesting the idea of eggs.

Some acres of ground just east of these Asphodel mounds were thickly bestrewn with fragments of mussel shells, the soil having also been blackened by camp fires.

To one feature that I observed in connection with all the Rice Lake mound groups, attention ought to be specially directed, viz., that they are at the important points on the watercourses. This is also a feature of the more important groups in Ohio, which are at the forks of the large rivers. The group at Cameron's Point, in Asphodel Township is at the point where the River Trent issues from Rice Lake; the group at Mizang's Point, in Otonabee Township is where the Indian River enters the lake; while at the entrance of the Otonabee River into the lake there is another interesting group.

With regard to this latter an important question arises. G. Copway, in his "Traditional History of the Ojibway Nation" (page 87, etc.), describes a war between the Ojibways and the Iroquois, and among other battles, mentions a bloody one between them at the mouth of the Otonabee River, *i.e.* where this mound group is situated. Copway adds that this battle, as well the others during the war, took place within the six years preceding the founding of Fort Cataraqui, (1672), but no record of it exists in the Canadian Archives, which are very complete. It is doubtful whether this tradition of a war is well founded in fact. I am inclined to think it was an afterthought suggested by the burial mounds at the place. The mounds at Burlington Beach also suggested a conflict, and the same is true of every bone-pit or communal grave of any kind from Montreal to Detroit, none of which could be understood by the modern Algonkins as burials made in times of peace. The war tradition itself probably had its origin in the Iroquois' attacks upon the Hurons, the latter having sought shelter among the Algonkins and become incorporated with them.

To the question who were the builders of these Rice Lake mounds, I can give no satisfactory answer. The only aboriginal occupants of this province in historic times have been the Huron and Algonkin nations. If the mounds were the work of either, it is more probable that they were made by the pre-historic Algonkins, amongst whom we may perhaps look for traces of the mound-builders, either as being direct descendants, or as incorporating remnants of that lost race. The Algonkins as well as the mound-builders were "water peoples," (using Humboldt's familiar description of the latter) and many rites appear to have been common to both races.

INNISFIL SERPENTINE RIDGE.

In the Rice Lake region I saw indubitable proof that there had lived in this province aborigines, who attempted the construction of mounds having other shapes than the ordinary conical burial mounds, or than earthwork fortifications. After returning from that district, I revisited, on September 18th, accompanied by John L. Warnica, who has lived for many years in the neighborhood, and knows the surface of it quite thoroughly, an embankment on lot 23, concession 13, of the township of Innisfil, which I had first seen eight years ago. This farm is occupied by William Irwin, who courteously gave us all the information in regard to this embankment within his power to give. On the occasion of my former visit I had made some notes of the phenomenon, and while making a map of it I had recognized its serpentine shape (see figures 44 and 45), but did not think it could have any significance to the Indians as a serpent form, as phenomena of this kind had not then been proved to exist in the province. The first settlers of the neighborhood, as much as fifty years ago, regarded it as, at least, partially artificial, a clay subsoil, in which very little grain or other vegetation would flourish, being at the top of it and at other places on the surface. I found that the residents, for these and other reasons, still regarded it as having an artificial origin, but they held the view, usual in such cases, that it had been a fortification.

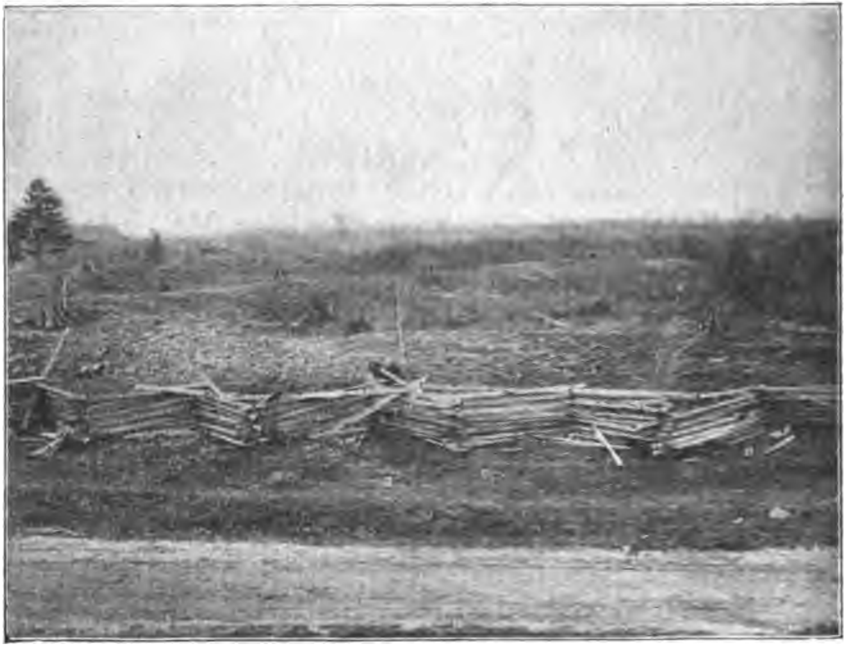


Fig. 44. Innisfil Serpentine Ridge (looking north).

The embankment, which has irregular but distinctly marked convolutions, is about 1,230 feet (375 metres) in length. Its height varies from five to seven feet. The top of the ridge, especially the rear half, which has not been tilled, is as narrow as a path, and is quite level; but along the front half, the action of the plough has worn down this original sharpness. It is still higher, however, than any surrounding ground. Its width is quite regular, the average being about thirty feet throughout its entire length. It ends in a narrow bank at one extremity, and is distinctly broader and flatter at the other, which just touches the 13th concession line. The first convolution, or loop, is a curve of more than ninety degrees. On the embankment at different places are stumps of pine trees, which must have spread their roots at least four centuries ago. A shaft, sunk three feet deep, on September 28th, to examine the kind of earth in it, showed that it was not a gravel reef such as one frequently finds, but was a clay bank. In this shaft some iron stains were found beneath a few small stones. This suggested that if the bank be artificial the stones had served the purpose of umbrellas in protecting the vegetable stains from obliteration by the water percolating from the surface through the clay, and that in other places not so protected the vegetable mould might have been weathered beyond detection. The size and shape of the embankment, as well as its relation to the surroundings, and the fact that water could pass freely around both ends of it, forbade the idea that it was built by amphibious animals as a dam.

On the opposite side of the road, in front of what we have called the head, is an oval basin, of artificial origin, at least as regards its form. The extreme length of this basin (i. e. from crest to crest) is 170 feet. The interior cavity, which is a perfect oval in form, is 85 x 48 feet. The embankment surrounding the basin, which is in the farm-yard of Henry Armstrong, formerly rose much higher, but has been worn down. A remarkable trench leads out of this basin, passes immediately before the part described as the head, and ends in a circular pit that bears marks of artificiality. At one part of its course this trench traverses a gravel-bed, the continuity of the gravel on both sides of it being still evident. In the low parts about the embankment, and in the oval basin, water formerly stood all the year round when the original forest existed there. These ponds were occupied by amphibious animals in considerable numbers, such as muskrats, mud-turtles and beavers. At the west side, the ground falls into what was once a cranberry marsh. As the stagnant water in the oval basin became a nuisance to the occupants of the dwelling near it, it became necessary to remove it; and, in order to do this, a drain was cut through the south part of the bank surrounding it, a few years ago. Mr. Armstrong observed in this drain, which was a deep one and answered the purpose of a section, that the earth at the top corresponded with the subsoil at the base of the cutting. At an intermediate part there was a layer of vegetable mould. Pottery fragments, stone axes and other relics, including a French copper coin, have been found at the east edge of this basin.

On ascertaining the above features of the embankment and its surroundings, I communicated with Mr. Boyle, who visited the spot with me on October 3rd. He was impressed by the peculiar shape of the phenomenon, and some of his observations were useful in solving the problem of its true significance. In the first place there was not abundant evidence, if it were artificial, of excavated places from which the clay for the structure had been taken. Then, while it was evident from the large circular earthwork (which we also visited) on the farm of John Fennell, one mile west, that earthworking Indians had lived in the neighborhood, its size was so great that it seemed improbable it should be wholly artificial. Mr. Boyle suggested that natural ridges might have been utilized by the builders to accomplish their ends. This appeared to be the more likely from the fact that there are similar ridges, though not more than half its length, beside it, having every appearance of being natural. The latter contain boulders, and have other marks of glacial formation. Such ridges are occasionally found in low ground; they are among the most recent of geological formations. In some parts of the country an object of this kind is called a "hog's back," and it is not unusual to find them used as roadways for vehicles, as appears to have been the case with one at the east side of the one under consideration. In addition to these considerations, the Indians, if they had bestowed any labor on this object, would work where they could get the best results for the least amount of labor. In order to test how far it might be artificial he left instructions with me to get a few openings and cross-sections put into it.

THE EXAMINATION OF ITS STRUCTURE

Mr. Boyle suggested, in connection with the proposed cross-sections that a low part would be likely to furnish some interesting features because, if the Indians had expended any labor at these ridges, such artificial places would probably have subsided in comparison with adjacent natural parts. He also suggested that an experienced well-digger should be secured as workman, one who would be able to readily recognise disturbed soil.

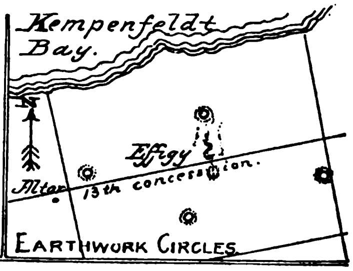
Accordingly, on October 9th, I took to the place a workman who had thirty years' experience in handling earth in wells, drains, etc. We cut half-way through the embankment at a low place marked "A," fig. 45. In the first eight inches there was considerable charcoal, but this can perhaps be wholly accounted for by the clearing of the land. The clay throughout was homogeneous, and of a brownish gray color; but the exterior layers were stained with vegetable matter to a reddish brown hue. This staining extended inward to a depth varying from eighteen to twenty-four inches, but it was difficult to say just where it ended as it shaded into the natural color of the clay. The dotted line in the diagram (figure 45) represents as nearly as possible the lower limit of these stained layers, which were appreciably thicker toward the edges of the embankment, just as the shape of it would naturally make them. Its depth seemed to be determined by the rainfall percolating into the clay, and also, to some extent, probably by the winter frosts.

The brownish gray clay, with this covering, constituted the body of the section. It seemed to be "made" ground for the following, among other, reasons:

(1.) The small stones in the clay were easily knocked out of their places; one stroke of the pick was sufficient, while in naturally laid clay sometimes three or four strokes are necessary.

(2.) The clay crumbled when turned out, much more readily than natural unworked clay.

(3.) The cutting could be rapidly made.



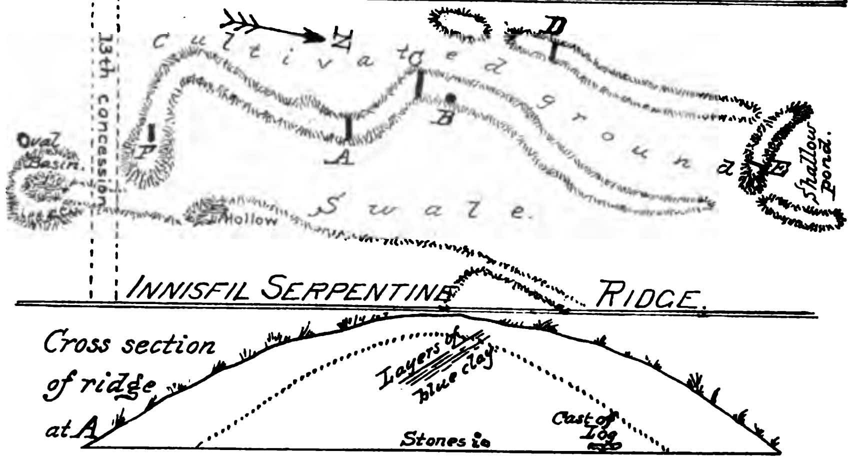


Figure 45.

(4.) Fibrous roots of thistles, &c., went down to the bottom of the cutting, five feet below the surface at the middle of the enbankment, indicating that the soil had been disturbed. The ground was full of flaws at this depth, and the fibrous roots had made their way into these.

The clay was damp, as there had been heavy rains for some time before. Water also lies in a low tract at the short distance of about fifty feet, and is undoubtedly absorbed into the surrounding clay, which latter substance is used in the manufacture of blotting paper on account of this very quality, viz., its good absorptive powers. These two considerations might modify the force of the reasons just given but would not entirely destroy them.

A test hole 3 feet deep put into the enbankment at "B" showed the same kind of clay as we found at "A."

The remains of fibrous roots and other specimens found so frequently in all parts of the cutting were examined microscopically by Dr. W. L. T. Addison, of Barrie, who visited the place while our operations were in progress and saw these specimens *in situ*. He has kindly furnished me with reports of his examinations, particulars of some of the more interesting and representative specimens being as follow:

Specimen No. I.—From a point 2 feet 9 inches deep and 6 feet from the centre. Gray clay with dark surface upon which are some fibres, suggesting a dead root.

Section (a). Magnified 400 diameters. At the outer sides is a diffuse rich amber color. The intensity of color obscures the form which becomes more distinct as we look towards the centre. It shows a regularity in color which gives it a fibrous appearance. This, however, will be seen to be due to the regularity of increase in thickness. There are very fine dots which have a highly refractive power on light.

Section (b). This shows the "bordered pits" of the conifers, and has some fairly distinct fibres. It, also, is of amber color.

Section (c). A large fibre with large "bordered pits" of the conifers, which show quite distinctly.

The "bordered pits," a cell structure peculiar to the pine, and the amber color of its resinous matter, suggest that it might have been the small roots of some pine tree, although no stump exists within 14 feet of the place. The resinous fibres of pine are almost the only kind of wood able to resist the attacks of the lime in the clay for any length of time. Pine wood is used for all outdoor carpenter work on acconnt of its resisting qualities, and the farmer knows to his sorrow that the pine stumps decay less rapidly than others. In this way it is evident that pine roots, even those of a very great age, could remain intact in the ground.

Specimen No. II.—From the same place as the last specimen. It shows dark iron oxyd colored fibrous material on a surface much iron stained.

Section (a). Three silvery white fibres which show no coniferous formations. The fibres are very plain and fairly transparent.

Section (b). This is a similar fibre but differs in length.

Section (c). The same may be said of this one.

There are many particles which break with fibrous cleavage, but are quite opaque and are by reflected light a very dark brown. These are presumably some sort of fibre changed to bog iron. There is a scarcity of the amber colored materials found in specimen I.

In other similar samples there are indefinite fibrous fragments, much replaced by iron.

Specimen No. III.—From a point 2 feet deep and 10 feet from the centre. Gray clay with many brown stains and containing much peaty matter, which on roasting in a crucible burns away. The burnt specimen is very red and becomes very hard. By reflected light the dark substance is seen to be vegetable matter, in many cases replaced by iron and in some cases by lime.

Section (a) is a portion having a dark brown color and showing separate fibres, which, however, are brittle. There are certain dark portions in which one cannot distinctly see fibres.

Section (b) has a bright glistening carbonate of lime surface showing forms like those of fibrous structure. It is apparently a coating of lime which has replaced some woody fibre.

The examination of a specimen of a sort very different from any of the above proved to be of considerable interest. It came from a point 3 ft. 6 inches deep, and 6 ft 6 inches from the centre of the enbankment. While digging at this point the workman drew my attention what he called a "log," distinguishable from the other clay by the way it crumbled. It measured ten inches across, besides portions at its edges not well defined. We give herewith Dr. Addison's remarks on this specimen:

Specimen No. IV.—It consists of fragments of a gray lime-bearing clay which show planes of cleavage. The surfaces shown by these fragments are stained a dark brown or black with lighter patches which by reflected light and magnified 125 diameters appear as crystalline calcium carbonate, etc. The staining occurs in parallel bands, the lime salts being apparently deposited on these stained surfaces, or taking the place of these stains. These dark bands, and in many places bright bands of carbonate of lime, are striated and indicate a form as replacing some organic fibre. The fibrous form is often quite distinct. At right angles to the more frequent or the ground striation are bars which are less frequent but still are quite frequent enough to convey to one's mind a regularity of formation in this direction, also.

It is evident that this clay "log" cannot be explained as a root. Under the microscope the specimens showed the woody structure to be entirely replaced by carbonate of lime and other inorganic substances. It was, in fact, a "cast" of the original wood, in which the structure in both directions was very distinct. Neither is it probable that it was a fossil deposit. The natural clay of this neighborhood is glacial, not post-glacial, such as would be deposited in recent ages by water. This is shown by the abundance of small stones mixed with it. Accordingly it could not contain organic remains except in a pulverized condition, and no such "log" would be likely to occur as a deposit.

This object lay horizontally on what was easily recognized as the division between the disturbed and undisturbed ground. This old bed, however, was not marked by any dark line of vegetable mould, as I made diligent search for this feature; but many iron stains were present where one would expect to find it. It was only noticeable by the ready cleavage of the clay at this level, while beneath it the ground soon became perceptibly harder and changed into a gravelly clay.

Tested chemically, the clay of the enbankment proves to be very full of lime; and as the situation is damp, no vegetable matter could resist replacement by iron salts or carbonate of lime for any length of time. When this occurs the clay is commonly said to "dissolve" the vegetable matter mixed with it.

At the centre were a few stones, not large, but significant on account of their position near the base of the enbankment. They were larger than any other stones found in the excavation.

Further cuttings were made on Oct. 28th, when Mr. Boyle was present. The remaining half of the section begun on Oct. 9th was opened. In this the fibres were abundant just as in the first half. A feature of interest consisted in some layers of blue clay slanting up the face of the exposed section to the centre of the top. It appears as if some clay of this colour had been flung up against the side of an incipient bank. On examining the level ground at the side of the embankment we found blue clay which corresponded closely with that in the cutting.

This section when completed was 31 feet long, 16 inches wide, and 5 feet deep at the centre, It was made in a part between two expansions in the width of the embankment, which are about 150 feet apart and include the second convolution. It seemed reasonable to suppose, therefore, that the part between these expansions (which were naturally formed so far as could be judged by their appearances) had been artificially filled. In order to compare the structure of the clay in the section with that of one of these adjacent expansions we selected the one to the north and made an opening into it 3 feet deep marked "C". The structure of the latter was a hard, undisturbed, and uniformly gray clay, quite unlike that in the section.

There is further evidence of the artificiality of this part between the expansions, in the fact that the immediately surrounding ground is so shaped that the natural drainage would pass through at this place. The only surface spring in the vicinity is at a short distance to the southwest of the section.

On the following day (Oct. 29th.) an opening was made at "D" into a lower ridge at the west side of the effigy embankment, for purposes of comparison. At one end of the trench there were some mixtures of clay which also crumbled when thrown out. At the depth of four feet, hard blue clay was reached. Two test holes in the adjacent level ground near this opening showed blue clay at a corresponding level, viz., 18 inches deep.

An opening marked "E" was made in the semi-circular bank at the north end of these ridges. It showed naturally laid clay. At one side, however, where the ground was wet. the clay was softer.

Finally, an opening marked "F" 3 feet deep was made into the south extremity of the enbankment, or that called the head. At the depth of 18 inches there was a layer of reddened clay, beneath which the ground was apparently undisturbed.

SITES OF ANCIENT VILLAGES IN THE NEIGHBORHOOD.

After examining the structure of this enbankment, I communicated with William Metcalf, of Meaford, who had lived on this farm for several years and had cleared the forest from the part on which it is situated. He drew my attention to the fact that there are sites of ancient villages situated in four directions from it,—north, south, east and west, (figure 45.) I had known of the existence of the three latter of these, without, however, recognizing that they were situated with reference to the points of the compass. These three are distant about a mile from the effigy, the former or north village being about half a mile.

With each of these villages is a large circular basin, which had evidently been used for religious or ceremonial purposes; the entire group apparently making what is known in the language of the archæologist as a Cosmic System, having the effigy in its centre. The villages having been located without regard to any natural advantages such as springs of water or easily fortified points of land, it appears as if they had been built up around the four circles which, in their turn had been placed, as we have just seen, at the four cardinal points of the compass from the effigy.

In the State of Ohio, (in Adams County,) there is another Serpent effigy, in connection with which the points of the compass are also observed. It is well known, too, that Cosmic or Sun worship was often intermingled with Serpent worship (so-called), many instances of this intermingling being found in Aztec remains as well as in those of other races.

The West Village. This appears to have been extensive. It may be described as occupying the four adjacent corners of four farms at the cross-roads west of the effigy. We have already referred to the circular earthwork on one of these farms, that of John Fennell, Lot 21, Con. 13, as it was the first one we identified in the system to which our attention had been drawn. This circle has a diameter of 152 feet, measured from the extreme outsides of its circumferences, or 110 feet from crest to crest. It is quite apparent from the nature of the earth in the embankment around this pit that it is subsoil from the bottom of the excavation, as it corresponds with the latter and differs very materially from the surface earth in the field beside it. In the same field there have been found large quantities of pottery fragments and other relics in spots showing evidences of fire. Some years age, Wm.

Metcalfe found a human skeleton in one of these deposits. These camp-fires are situated along the small ravines—places well sheltered, from which circumstance it might be inferred that they were used as winter quarters. In the ravines south and west of this field, *i.e.*, on the adjoining farms, there are also remains of similar camp-fires. On the farm on the opposite corner, viz. that of John Metcalf, (Lot 20), ash-beds and relics have been found; while at a spot immediately south of his dwelling, and about ten inches below the surface, was found a circular bed of small stones bearing marks of fire. This is what may be called an altar or hearth. Similar objects have been found in Ohio, but no instance of the kind in this province has hitherto come to my knowledge. An object of this kind found near the Serpent effigy in Adams Co.. Ohio, has been called a place of sacrifice but with what correctness I am unable to say. It should be added that at the shore of Kempenfeldt Bay, about half a mile distant are two large quarried stone blocks, four feet across.

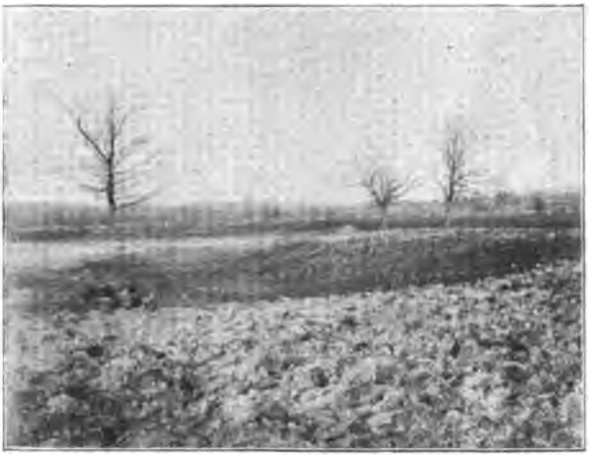


Fig. 46. Embanked Hollow, Lot 21, Con. 13, Innisfil.

The South Village. This is situated on the farm of Henry Mayor, north-half lot 22, con 12, and there have been found the usual relics, —pottery fragments, pipes, stone axes, etc. Here is an artifical pit almost circular, having a diameter of 80 feet. Seven camp-fires near it are arranged in a circle, and there are two or three others also near at hand. In an adjoining field on the farm of Robert Webb, there are also many remains of camps situated in a ravine A piece of slate (an unfinished gorget) was picked up by Mr. Boyle as we walked over this village site.

The North Village. The circle here, (to which Wm. Metcalf first drew my attention), is situated on the same farm as the effigy. It is 80 feet in diameter, and has been formed in a small natural ravine. Its present depth is 10 feet. The gravelly clay subsoil thrown out of it contrasts with the adjoining surface soil. At a short distance north of the circle are camp sites on which large trees had grown. The

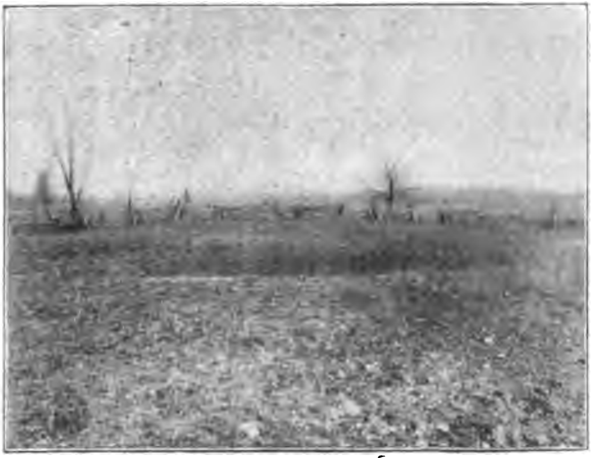


Fig. 47, Embanked Hollow, north of Serpentine Ridge, Innisfil.

usual relics have been found at this village, and near it a piece of native copper was once picked up.

The East Village. This is situated on north-half lot 25, con. 12,—the farm occupied by John Irwin. On the west slope of the ridge that passes through this farm are many evidences of camp-fires. Besides these is a circular pit, but it has been so mutilated by the cultivation of the ground and other agencies, that any artificial characters it might have possessed are now almost extinguished. At the distance of about quarter of a mile along the same ridge is a Huron ossuary which we examined on Dec. 11th. While at a short distance southeast of this ossuary is another village site to which it apparently belonged.

Notwithstanding the existence of this ossuary near the East village there is no proof as to what race of Indians dwelt in the four villages of the system about the effigy. The camp-fires of the west and south villages were single fires arranged along ravines, thus differing in two respects at least from the Huron "long-houses" which were usually situated on rising ground. They are probably very old for besides being overgrown with large trees the earth wears a reddened appearance at the camps rather than a blackened one, the carbon having been much "dissolved" and the iron stains alone left, thus differing in another respect from the ordinary Huron site.

OTHER OBJECTS OF A SIMILAR KIND.

It is evident from the facts brought together that this effigy, whatever may have been its origin, was an object of veneration to some of the races of Indians who dwelt in the villages in the neighborhood.

There have been many such objects of worship, or rather objects of propitiation. About Georgian Bay various natural features have been regarded with a religious veneration from time immemorial; these include some oddly shaped rocks near Parry Sound which have been propitiated by passing Indians with tobacco offerings until recent years, in fact the offerings are still made by the pagans; Giant's Tomb, a large island in the southeast corner, resembling a giant lying on his back; Turtle Rock, in the North Channel; and Michilmackinac itself was the "Great Turtle." The Roches Perceés (pierced rocks") of Manitoba, the Sand-dunes of Lake Superior, the Garden of the Gods in Colorado, the Old Man of the Mountain in New Hampshire, are a few among the countless instances of natural objects that have been held in the highest regard by the aborigines of this continent.

REMARKS ON THE SIGNIFICANCE OF EFFIGIES.

Unique notions of natural forms having filled the heads of the aborigines, an effigy of the kind under consideration suggests how there may arise the notion of an effigy mound. Indeed it would seem to be in the very nature of an effigy mound to be at least partly natural. Such mounds are chiefly found in the glaciated parts of North America where singular natural forms occur. They even follow the "V" shape of the glaciation into Ohio toward the south.

In various Indian tribes, including the Micmacs, Ojibwas, Moquis, etc., there were Snake Dances, the object of which evidently was to propitiate these animals.

It is interesting to consider why the serpent effigy always had an egg or oval form before it. On referring to my bookshelves I find that the egg represents "life" and the serpent "eternity"; but there is no suggestion as to what the combination of the two forms can mean. On any such assumption the latter question must remain impenetrable, except perhaps to a skilled metaphysician. These ideas, taken singly, were almost too abstract for the aboriginal mind to elaborate; and in combination, as the Indians did not take up post-graduate work in metaphysics, it will be advisable to seek for a simpler explanation of the frequent occurence of the two forms together. Natural history will, I think, furnish an explanation. The food of serpents is always living prey with the single exception of eggs, as the little birds know to their sorrow. The aboriginal snake-charmer, taking advantage of that animal's partiality for eggs, throws an egg in front of the reptile to occupy its attention. When the Indian with his head full of superstitions first sets his eyes on the natural serpent shape, his first thought would be to charm the "animal" with an egg.

It should be distinctly understood that these serpent effigies are entirely different in their kind from the Rice Lake serpent, which is wholly artificial, and apparently has a different significance.

BALSAM LAKE.

By Geo. E. Laidlaw.

Since the fall of 1893 I have not had much time, till this August, to visit sites and other localities which have become known to me as places connected with Indian remains, with the exception of one place which I discovered last year in opening a road through a little known locality, and which I visited shortly afterwards in your company, and alone several times since then.

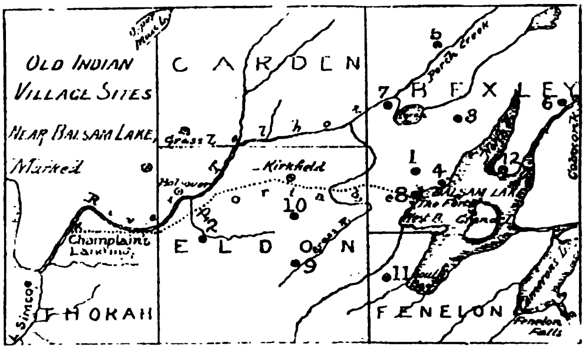


Fig. 48.

In April, 1894, I visited the site on lot 22, concession 8, Eldon Township, owned by S. Truman. This is a large site, and is on the north bank of Grass River, which empties into the Talbot, flowing west into Lake Simcoe. The site is on high ground, and showed the usual signs of aboriginal habitation. I picked up pottery fragments, nodules of flint, a piece of worked slate, shells, and a face of pottery, evidently split off a pot, and not a fragment of a pipe. Mr. Truman informed me that the place was ploughed up about 1887, and at that time clay pipes and stone "skinners" were found in abundance. He had found an iron French axe on a hill a quarter of a mile away, and a steel spear-head near the site, and since then a steel knife-blade was picked up. These were probably dropped by later Indians, as an old squaw told his father that she was born on the hill to the south of the river, and so were her father and grandfather; so that may account for the presence of white-man relics, as the site showed the same characteristics as other sites in the vicinity, where no white-man traces have been found.

There were no graves known of, and, if any existed, were probably obliterated by cultivation. Though picking up quantities of bones and shells, I did not find any worked ones. My time was limited for examination. This site is No. 10, in keeping with the ones numbered previously.

Pits on village site, Bexley. In the early summer of 1895, I discovered the village site on lots W. ½ 5 and 6, concession 2, Bexley, and after you came here we explored it thoroughly. I also visited this place several times this year.

From the accompanying sketch (figure 49) it will be seen that the Talbot River circles round to the north-east side of the village, flowing west; consequently the village site, as evinced by the ash beds, faces east, while the pits lie on the opposite slope of the hill, to the south-west. A large portion of this site is at present covered with timber and thicket, and is very difficult to examine, but the road allowance is cleared, showing the majority of the pits. While those in the field were partially filled in by being cultivated this year, by next year all signs of those pits in the field will be effaced, and the road bed will cover more.

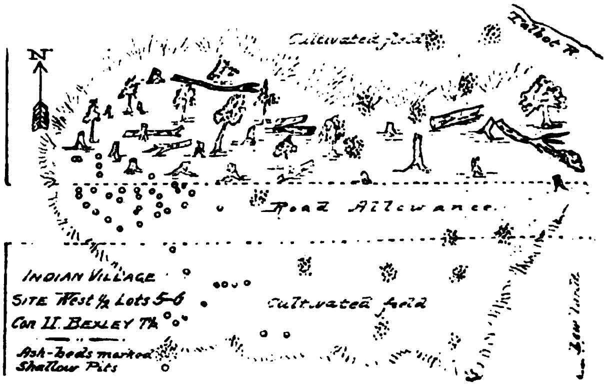


Fig. 49.

This sort of pit has just lately come under notice, and attention has been called to those near London, Ontario, and Parry Sound. See previous reports. It is not easy to conjecture what these pits were used for; but the general idea is that they were used for storing corn in small quantities to prevent heating—the size of the pits at the present day being from five feet to seven feet wide, and up to two and a half feet deep. Corn has been found in pits of this character in one or two localities in Ontario. Now, from their disposition, they could not have been used for setting stockades in, or for holding corner posts of houses; also, on thorough examination, the earth shows no disturbances beneath the bottom of the pit, or traces of timber. They were not used for ovens to bake pottery in, for they exhibit no traces of fire, charcoal or ashes, and there are no shreds of broken pots in their immediate vicinity; and, as the earth is a light loam, with a large proportion of sand, precludes the idea of their being caused by excavating the clay for pottery purposes. If used in connection with "sweat houses," it might reasonably be supposed that some of the stones used to cause steam when heated might be found but no large stones showing discoloration by fire occur in them If used as graves, the bones have been exhumed for a general burial in an ossuary, at the "Feast of the Dead," but, as no ossuary is known to exist between here and the ossuary-using Hurons, west of Lake Simcoe, the grave theory is hardly tenable.

These pits are grouped in no particular order, though preference seems to be given for short rows of three or four. Pine stumps measuring, with bark and sap-wood burnt off them, three feet in diameter, grow out of several of these pits. The number of pits at this site is about fifty.

The flat, lying to the south-west of the site, being in every way suitable for the cultivation of such cereals, and vegetables, as the Indians grew, would explain the relative position of these pits to the site. These câches would naturally be placed as near and convenient as possible; the swampy nature of the ground to the east prevents them being placed there, while the northern slope of the hill is too stony for cultivation, as the Indians cultivated. There were no traces of ash-beds to the south or the west of the pits, and nothing of any sort was found in them.

The ash-beds lie between the pits and the river, which is about eighty rods distant. On examination the ash-beds, which are about two feet deep by ten or twelve feet in diameter, disclose the usual remains, but as yet no relics have appeared showing traces of contact with white men, though it is rather too soon to assume too much without a thorough examination. However, among the relics recovered from here are several discs of shell, stone and pottery, some fragments of pottery having a raised pattern, and other unusual patterns; dog whelks apparently from the sea-coast, perforated unios, a piece of graphite, bone awls and beads, and a peculiarly moulded clay pipe which you found yourself, said pipe being cylindrical with a flat bottom, moulded stem hole, and having a tally on the front, all these being unusual features. The unio shells in the river here are larger and thicker than the lake mussels. Fragments of pottery were picked up amongst the roots of turned-up pine trees of a large size. This site is within half a mile of Raven Lake, an expansion of the Talbot River, and is near the junction of Perch Creek with the Talbot. No graves were found.

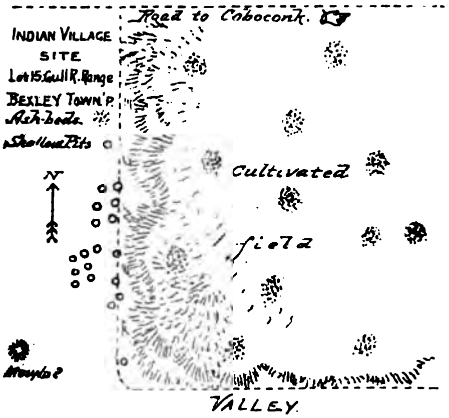


Fig. 50.

In September of this year I heard about a site at Mr. D. Smith's, lot 10, Gull River Range, Bexley (figure 50), and visited it several times. It was afterwards examined by yourself.

The Indians had access to the lakes above and below by canoe, and by going a little north could strike a canoe route to the Georgian Bay *via* Black River, or Head River.

The major part of this site has been under cultivation for some years, but enough is left to be interesting. This seems to have been a very compact village, judging from the proximity of the pits to the ash-beds, and the relative closeness of each individually. The natural condition of the ground had a tendency to make the inhabitants economize space. The surrounding land being not so amenable to cultivation, being very shallow and covered with boulders, may have forced the inhabitants to live largely on fish from the adjacent lakes and rivers. Even to this day these waters teem with maskalonge and bass of a large size, besides other fish, and the lakes in the granite region to the north are literally alive with salmon trout.

The pits here are to the west, and are larger and deeper, and more systematically arranged than the above-mentioned ones, if one can judge from the few that remain. Unfortunately, more than half the group has been filled in by process of cultivation. The remaining ones, eighteen in number, average two feet by eight feet, and seem to be in rows running in a southerly direction.

To the west of these is a large area covered with large blocks of granite and limestone. Further on to the southwest is a swamp and another swamp to the east. If any cultivation was done it was to the north.

About thirty rods to the east of the pits, and further down the hill, were about forty single graves, so here we have the single graves and the pits in close proximity to each other, proving that these pits were not graves. These pits on examination gave the same results as the ones before mentioned. No relics, traces of fire, or disturbance of the soil being found in them. A large spring exists to the east of the graves.

A large pine tree grew out of one of these pits; the stump now remaining, and having passed through fires has the bark and sap wood burnt off. It now measures three feet eight inches in diameter, and allowing on an average sixteen annual rings to an inch and the sap wood to be two inches this would make the tree 310 years old till it was cut down, which was probably about twenty-five years ago; making from now till the tree started to grow 335 years past,* or the year 1560, showing that the village was abandoned at least fifty-five years before Champlain passed through these waters with his war party of Huron braves in 1615, to attack the Iroquois south of Lake Ontario; or twenty-five years after Cartier discovered Stadacone and Hochelaga in 1535. Champlain ascended the St. Lawrence in 1603, and discovered no traces of Hochelaga, which in the meantime had been "wiped out" by the Hurons. May not these towns have belonged to the Hochelagans, and shared the same fate about the same period? Dawson in his "Fossil Man" says that the tribes to the north-east of Hochelaga, were either Hochelagans or tributary to them, who were akin to the Hurons, yet not of them. This conjecture if allowed would explain the absence of towns, etc., in this district which Champlain would have been sure to notice as he passed through, were they then existent. Dawson furthermore identities his Hochelagans with the extinct Alleghans. This extermination of one people by another had been going on for ages when the white man came. The Iroquois were busy at it then with the Hurons, Eries, Neutrals, etc., only to be driven away by the white man themselves. Witness the extermination of other tribes since then.

---

* It has recently been shown that this basis of reckoning time is not so trustworthy as was supposed.—D. B.

This last site was a large one and had been occupied for a long time as evidenced by the accumulation of ashes and numbers of heaps in a small area. This place has been visited by relic hunters and large numbers caried away. However Mr. D. Smith very generously gave a large soapstone pipe of the vase type, a long ceremonial double bitted chisel, some stone discs and celts.

On examining the ash-beds we found stone beads, discs, pieces of graphite and hematite, pottery fragments, clay pipes of usual types; pottery discs; some rubbing stones, worked pebbles of steatite; worked flake of Huronian slate, also a blocked out steatite pipe. Mr. Smith informed me that he had found flint arrow-points here, which are very rare in this section, and not as a rule found on village sites, though flint, jasper, quartz, and chert flakes and nodules abound on them. The inhabitants may have lived largely upon fish and the proceeds of agriculture, or used bone arrow-heads. It was not on account of scarcity of material that arrow-points were lacking, for quartz abounds in the near-by granite regions, and I have observed out-croppings of chert on the flat limestone rocks large enough to make even good-sized spear heads and knives.

The locality of this site is one-quarter of a mile from Gull River on the west side, two and a half miles from the lake at the mouth of the river and one and three-quarter miles from the extremity of North Bay, which lies towards the west. It was very well hidden from surprise from enemies travelling on the river, having the high hill and swampy valley intervening.

Another site visited this fall is on the farm of A. McDonald, Kirkfield, lots 44 and 45 S. P. R. Eldon. This one is located on the south side of the range of hills that lie to the south and east of Kirkfield. This site has also been cultivated for a number of years, but the ash beds are plainly noticeable yet. They lie in a semicircle on high ground, on the northwest side of a swamp backed up by the hills, and cover an area of about 300 yards in length. The convex side faces the swamp where there was formerly plenty of water. As the place was covered with stubble, and the time at my disposal short, I could only give it a cursory examination. The soil is very fertile and suitable for the growing of those cereals, etc., which the Indians cultivated, and formerly supported a dense growth of large pines, some stumps of which when pulled up disclosed corn that had been cached, preserved no doubt by carbonization.

Relic hunters have carried away a large number of relics from here, some very good ones, but none showing the influence of white men that I am aware of. I was fortunate enough to obtain some fragments of pipes, pottery, stone and clay discs, a vase pipe of small size, and some perforated dog whelks.

I also visited a village site on Long Point, Fenelon Township, situated on the south end of Balsam Lake. This one was on a hill and near by on each side was a river, one flowing into West Bay the other into South Bay, thus giving the place a certain strategic importance. Many years of cultivation have obliterated all traces. Mr. Perrington, the owner, stated that there were a large number of ash beds and graves when he first settled there about thirty years ago, and lots of relics were picked up and taken away. Soil here is also suitable for the growing of corn, tobacco etc. There were no traces of embankments, or any of palisades found round the above villages. If stockaded at all the palisades must have been constructed in such a manner as to stand without being set in the earth. Perhaps they leaned in and were braced on the inside. This would do away with an enormous amount of digging, which would suit the Indians, for they had inadequate tools for such purposes.

I noticed on Long Point on the east side, that an embankment about four feet high, and and ten or twelve wide, running along the shore and then at the end of the bay turning in at an obtuse angle. It may have been caused by an ice shove, or a series of shoves, but it lay in such a position that I hardly think the ice could have done it, especially that part extending inland. It might be a deposit of the Glacial Period. I had neither time nor tools to examine it.

I also visited sites described in former Reports, and obtained pipes celts, bone and horn implements, discs, perforated shells, etc.

The accompanying map, figure 48, will show the relative positions of these towns to each other, also to the waterways.

In accounting for the abandonment or destruction of such towns as these, may we not take into consideration the agencies of fire and disease? In dry seasons forest fires would sweep over large areas in short perods of time. Witness the huge conflagrations of our own days in the lumbering districts, which we are powerless to check, and the number of modern towns burnt out. The Indians could do nothing but flee to the water. Spread of disease, superinduced by the state they lived in would cause them to abandon a town and erect another near by. The abandoned town constructed of wood and bark would then quickly decay. This being repeated again and again would give a number of sites in a limited territory, all built by one people.

It is noticeable that the majority of celts or "skinners" found hereabouts are of very poor workmanship. They seem to have been made on the principle of "anything will do," consequently we see that barring being worked to an edge, very little work is put upon the body of the implement, other than to bring it to desirable shape. We may, however, except a polished axe, that may have been imported, supposed to be of coarse jade. It was found in Eldon Township, to the north of Mitchell's Lake, near Champlain's Portage. The blade is exquisite in make and finish, and is of the following dimensions: Length six inches, breadth four, and thickness seven-eighths of an inch. The edge is perfect and the angles are well defined. The sides are flat and highly polished. Color a dark green approaching black, with one corner of a lighter color. A portion has been broken out at the poll, which was ground to a blunt edge, and which subsequently had been destroyed by abrasion. If this is jade, it is the first example on record found in Ontario, and furnishes another instance of the ancient traffic existing throughout North America previous to its discovery. Among the chisels obtained is one thirteen inches long, double bitted, worked all over but not polished. Resembles the ceremonial chisel figured on page 39, Report 1886-1887.

Few gouges occur, but these are generally of good workmanship, one found near the jade axe, has a large lip and a round body, tapering to a conical head. Material—dark slate with lighter veins. Another from Bolsover is of light green argillaceous material, highly polished, with one end formed into a gouge, and the other chisel shaped. Side angles well squared.

A peculiar little tool, a rubbing stone celt shaped and highly polished, the edge rounded as if for dressing skins; from Long Point, has somewhat the appearance of a duck's bill.

A hammer stone, from Coboconk, is cylindrical in shape with square ends, and is about four inches by two and a half in diameter. It has a slight groove at one end. It may be an unfinished implement of the same class as figure 96. Report '90-'91.

Of horn implements—one new variety presents itself by two specimens. These are implements peculiarly suitable for insercion in club heads; and in outline are curved like a hawk's beak, terminating in a sharp point, and are about six inches long and moderately thick. They are split off the butt of a horn. A finished one is from Eldon, and an unfinished one is from Bexley. Both were found on village sites.

There are upwards of fifty pottery and stone beads or discs from village sites, in every stage of manufacture, and are of the smallest size, half an inch in diameter to two and a half inches, and three-quarters of an inch in thickness, some being unperforated, but otherwise finished.

These discs occur very frequently on village sites, and may have been used in various ways. Probably the smallest ones were used as beads for necklaces. Some of the larger ones (unperforated) may have been used in gambling, or games; whilst the largest, which are always perforated, may have been spindle-whorls or drill-weights. The pottery discs were made out of pieces of vessels, and were rarely perforated. They may be considered make-shifts, as they are usually rough, with slightly ground edges. They may have been made in a hurry during the progress of some game, or by the children for some amusement, in imitation of their elders. Some regard the thin discs as buttons. See p. 90, Boyle's "Primitive Man."

From Long Point and from Bolsover, are two good specimens of the so-called "women's knives." Material, gray slate.

Two shell discs, unperforated, are, perhaps, unfinished wampum, and four are portions of perforated unio shells; others are perforated *helices*, commonly called "dog whelks." These are sea shells, and are evidence of intertribal barter. All these shell specimens are from village sites. Carver in his travels, 1793, remarks on the prevalence of small sea shells among the interior tribes, who used them as ornaments, and valued them for their scarcity.

There is one specimen of the "ghost" arrow, of sheet brass. See figures 80 and 81, report '91. This class of relic being very thin and carelessly made, was totally unfit for war or hunting. It is believed that they were made especially to be buried with the departed braves. As the "spirits of the dead" ascended to the "land of the spirits," or "happy hunting grounds," they needed with them the spirits of their weapons, and implements to hunt the spirits, that represented the animals of the earth, in that elysium.

The very handsome brass pipe-tomahawk, with a steel bit dovetailed into the brass, has a flowered pattern carved on each side of the blade. The marks of the engraving tool can still be seen with the glass. The pipe is on the pole of the axe, and the handle formed the stem, so that the "brave" who formerly owned it, could enjoy his smoke from the weapon he used in war. This weapon was too light and small to have been used to fell trees with, but with it an expert could strike a terrible blow. Taking everything into consideration, a light, effective weapon, with which one could strike a sequence of rapid blows, was much preferable to the heavier iron axe of French make, with which a lesser number of blows could be struck in the same time. This applies to war clubs and stone axes. It is a noticeable fact that "coup sticks" of the modern western Indians, are far lighter than one generally imagines. One generally associates with the term "war club" a huge ponderous smashing club; whereas it is the opposite. The modern war club being generally a waggon spoke, with a couple of butcher-knife blades, or spear heads set in the end at an angle. The above tomahawk was ploughed up near Gamebridge, Lake Simcoe. Pipe-tomahawks are not uncommon especially those of iron; but brass ones are rare. One was discovered some years ago at Dalhousie, and still more recently, a lead one was found at Lake Scugog.

Several specimens show the various types of clay pipes occurring here. Some of them, especially the round and square top cornet-shaped, show affinity to those of the Hurons; while others show affinity to the Hochelagans.

The human face pipe occurs quite frequently, often grotesquely formed, with the addition of animal ears. One is a double-faced pipe Balsam Lake, others show different types of faces, and there is a specimen having the hole bored through the mouth for the insertion of a stem after the original was broken off. This utilization of a broken pipe often occurs. Several of the stems after being split, show one method of forming the stem hole, namely, by moulding the stem around a cord of twisted fibre or grass, which was consumed in the baking of the pipe. The unique specimen exhibiting three new features, namely, the stem hole moulded in it, a flat bottom; and a tally is cylindrical in form, without ornament, resembles somewhat a diminutive mug. This specimen was found by Mr. Boyle.

A white stone pipe from Woodville, perfect, shows much use, notches being worn at the end of the stem, no ornamentation, material rare, steatite, resembles somewhat fig. 27, report 91. Another is a long, slender, square-shaped pipe, material grey steatite, or soapstone. It has a head of some animal carved in relief, on the top and incised herring-bone pattern on the sides, locality, Bexley Township.

A rare pipe represents a human figure in a squatting position. It has been remarked that these pipes suggest a person taking a rest with a bundle on his back. See fig. 26, report '91, which this one resembles, but is much smaller and has its arms crossed on the top of its knees, and is without the hat. The legs are separated from the body, and there is a checker-board pattern on the base. Material, dark grey steatite: locality, Long Pond.

The fact that our Indians never carved offensive objects militates against the idea that this class of pipes, represent persons peforming natural functions.

The vase type, which is the commonest here, is represented by three specimens, all of steatite. One is a large, grey, unfinished pipe from Coboconk. Another is a large, well polished, stained black, double-stem-hole pipe, with one side of the base drawn out to a toe, and perforated for the attachment to a stem, or of an ornament. Locality, Somerville Township. This is the third specimen of a double stem holed pipe from this locality, two being vase pipes, and the third a panther pipe.

A small grey vase pipe is from Kirkfield. A fragment of a squared-top bowl, like the Huron clay pipe, shows plainly the circular striæ resulting from a rotatory drill.

Copper weapons and implements occur very rarely here. A knife (See figure 18) found on "the right of way," Trent Canal, lot 3, S. P. R. Bexley. Dimensions, total length eight and a half inches. The tine is two and a half inches long. Greatest width of blade one and five sixteenth inches. Thickness one-eighth. It is double edged, with both edges straight meeting in a point. See knife figured on p. 23, Whittlesey's Ancient Mining on Lake Superior, but this one is much better made and has evener edges. The other copper knife from here, which is round pointed, can be compared to the one figured on p. 26, same work. Locality, Bolsover.

Knives of both these patterns occasionally turn up throughout Ontario, and those States in the vicinity of the Great Lakes. Some exception is taken to their shape as indicative of European influence, but on giving the matter a thought one can easily see that the tine for insertion was better fitted for hafting, than the socket.

The edges of the cold hammered socket would easily give under pressure and thus the inserted handle would always be more or less loose. What is more fitted for the haft of a tined blade than a portion of a deer horn? The tine being driven home in the cellular portion of the horn. One might doubt the origin of these knives, if like the scalping knives introduced by the early traders, the tine was broader and had holes for rivetting on the handles.

The question is whether the Indians manufactured these copper implements or did they get them as finds, or heirlooms from their ancestors, or by barter with other tribes, or as loot in war?

The Hurons and Iroquois, and other tribes living around the Great Lakes, when first known to the whites did not manufacture or work in copper, though Cartier records the Hochelagans as having acquaintance with copper and silver.

The majority of copper implements found in the vicinity of the Great Lakes and the Middle States, are believed to be made out of

Lake Superior copper. Though copper occurs as drift in these districts, it is not plentiful enough to account for all the implements discovered, and we also have the "hull mark" on some of them, namely silver nodules in the copper matrix which proves them to be of Lake Superior copper for no other copper on the continent possesses this feature.

The accompanying sketch map will show the relative positions of the villages, which are numbered, to each other, nos. six and seven are the ones that have the pits.

Credit must be given the undermentioned for donations:

Thos. McNish, Long Point, slate knife and rubbing stone.

G. McKague, Bexley, gouge celts, clay pipes and bone awls.

Wm. Irwin, Bexley, celts, clay pipes, discs, awls, perforated shells and rubbing stone.

J. Bartley, celt and clay pipes.

Mrs. J. W. Laidlaw, Bexley, six celts.

D. Smith, Coboconk, vase pipe, discs, beads, celts, chisels, awls bone ornaments and worked pebbles.

C. Fry, Kirkfield, jade axe, slate gouge, work stones.

D. Wright, Kirkfield, celt, worked slate slab, white quartz spearhead.

C. Burchael, Somerville Township, argillite celt, two chisels.

Jas. McGirr, Bolsover, slate gouge, awls, five flints, two slate pendants, slate knife, six clay pipes.

Duncan McPhail, Victoria Road, copper knife.

W. White, Somerville Township, double-stem-hole vase pipe, and disc.

Alex. Wilson, Bexley, skull.

C. J. Gilchrist, Woodville, flint scraper, white stone pipe, three clay pipes.

M. Haygarth, Eldon, flint scraper and disc.

Mrs. R. Campbell, Kirkfield, discs, clay pipes, worked stone.

Miss A. Campbell, Kirkfield, clay pipe, perforated shells.

APPENDIX A.

ONTARIO MOUNDS.

In the *Canadian Journal* for September 1860, there is a paper by Mr. Thomas Campbell Wallbridge, in which he refers to the existence of mounds along the shores of the Bay of Quinte! "Commencing at Rednerville, in the township of Ameliasburg," he says, "they may be traced along the Bay shore above the Plains of Massassaga Point, a distance of about eight miles. In this space, including the island of the so-called 'Big Bay,' upon which they also occur, perhaps one hundred distinct mounds can be counted; they are not, however, confined to these limits, for, from enquiries made with a view to ascertain their extent, it is probable they will be found at intervals following the shores, from the eastern to the western extremity of the Bay; they are likewise said to occur at a place called 'Percy Boom.'* upon the river Trent, and perhaps by ascending to the head waters of that river they may be traced to the shores of the Upper Lakes, and thence to the most remote parts of the continent.

"As far as has yet been ascertained, there is but one class or form of mounds in this part of the country, and the truncated cone is the shape they assume. In size they vary from a diameter at the base of thirty to fifty feet, to a diameter at the apex of twelve feet, Each mound has a shallow basin or circular depression upon its summit, which, whatever may be the size of the work, has a diameter of eight feet; and no mound under my observation possessed an altitude of more than five feet. It is a remarkable peculiarity of these works, that in almost every instance they occur in groups of two, and at irregular distances, the one group from the other. Irrregularity is likewise observable between one mound and its fellow, these being sometimes found in juxta-position, and again from 50 to 100 feet asunder.

"The two of the same group are always of one size. With respect to the surrounding country they are situated apparently without design, now at the foot of a commanding hill, then half way down the side of a bank, and again so near the shore that in several instances they have been destroyed by the action of the water. Twice they have been found in very low or swampy ground, and in these cases they occur singly."

On making an examination of some of these mounds in company with Mr. Henry Cawthra, of Toronto, Mr. Wallbridge discovered "human remains and objects of curiosity and art," although having opened five on a previous occasion he discovered almost nothing except "a few bones near the surface" which he very sagaciously remarked "is no indication of the purpose for which the work was orginally built, for it is well ascertained that many of the mounds of the Western States, constructed evidently for different objects than those of sepulture, have been used by modern Indians for that purpose."

It is eminently satisfactory to know that so intelligent an observer as Mr. Wallbridge has left us a record of the work he performed thirty-eight years ago, as few, if any traces of the mounds he mentions, can now be discovered.

The following quotation was kindly supplied by Mr. A. F. Hunter, M.A., Barrie.

"The Rev. Dr. Reed, a Methodist missionary who spent two years in Toronto and the new settlements of York, Peel and Halton counties

---

* The place, formerly known as Percy Boom, is about five or six miles below Campbellford, near the village of Meyersburg. It probably took its name from the village of Percy, now Warkworth, three miles distant, in the township of Percy. A boom was constructed here to collect the timber, of which immense 'drives'. used to be floated down the River Trent.

(1820-22), has described the Burlington mounds, etc., as they appeared in that day. His description which was first published probably in his 'Reminiscences of Itinerant Life,'—a series of newspaper articles —was reprinted in Carroll's "Case and his Contemporaries" (Vol. I. pp 164-5), from which we make this extract. Dr. Reed says:

"At the head of Lake Ontario is a considerable body of water separated from the lake by a sandy beach about five miles in length, and from 80 to 100 yards in width. The water thus separated from the lake is called Burlington Bay, at the upper end of which now stands the City of Hamilton. The outlet of the bay into the lake is near the north end of the beach, and is celebrated as a famous fishing-place. The Indians have some curious traditions concerning this particular region, to which I will presently refer. I noticed in passing over this beach singular excavations at regular intervals about midway between the lake and the bay. They were about twenty or thirty yards apart; originally of a square form, and measuring from ten to fifteen yards on a side. They were evidently artificial, and of a very ancient date, as in some instances old trees were growing within them, and the Indians had no tradition of their origin or design. I judge that they must have been intended for military use. At the north end of the beach, on the main land, beautifully situated near the lake shore, was the elegant residence of Colonel Brandt, son of the old chief of revolutionary celebrity, [the "old chief" himself was alive in Case's time.] The Colonel was an educated and well-bred gentleman, and with his family associated with the higher classes of society. (And this was true of the father, who was educated in England, as well as the son). In this immediate vicinity the soil was mingled with vast quantities of human bones, stones, arrow-heads, hatchets, etc., the weapons of ancient Indian warfare. In sight of the mansion, and in plain view of the road, was a large mound of earth filled with human bones. One or two others stood near but had been demolished. In several instances I was informed, stone-hatchets and arrow-heads were found firmly fixed in skulls, [!] plainly indicating that the victims had fall in some hostile encounter."

APPENDIX B.

SERPENT WORSHIP.*

"To the modern educated world, few phenomena of the lower civilization seem more pitiable than the spectacle of a man worshipping a beast. We have learnt the lessons of Natural History at last thoroughly enough to recognize our superiority to our 'younger brothers' as the Red Indians call them, the creatures whom it is our place not to adore, but to understand and use. By men at lower levels of culture, however, the inferior animals are viewed with a very different eye. For various motives, they have become objects of veneration ranking among the most important in the lower ranges of religion. Yet I must here speak shortly and slightly of animal-worship, not as wanting in interest, but as ever abounding in difficulty. Wishing rather to bring general principles into view than to mass uninterpreted facts, all I can satisfactorily do is to give some select examples from the various groups of evidence, so as at once to display the more striking features of the subject, and to trace the ancient ideas upward from the savage level far into the higher civilization.

---

* Primitive Culture, vol. II. p. 208 and following pages, by E. B. Tylor.

First and foremost, uncultured man seems capable of simply worshipping a beast as a beast, looking on it as possessed of power, courage, cunning, beyond his own, and animated like a man by a soul which continues to exist after bodily death, powerful as ever for good and harm. Then this idea blends with the thought of the creature as being an incarnate deity, seeing, hearing, and acting even at a distance, and continuing its power after the death of the animal body to which the divine spirit was attached . . . .

Whether an animal be worshipped as the receptacle or incarnation of an indwelling divine soul or other deity, or as one of the myriad representations of the presiding god of its class, the case is included under and explained by the general theory of fetish-worship . . . . The three motives of animal worship, viz, direct worship of the animal for itself, indirect worship of it as a fetish acted through by a deity, and veneration for it as a totem or representative of a tribe-ancestor, no doubt account in no small measure for the phenomena of Zoolatry among the lower races, due allowance being also made for the effects of myth and symbolism of which we may gain frequent glimpses. Notwithstanding the obscurity and complexity of the subject, a survey of animal-worship as a whole may yet justify an ethnographic view of its place in the history of civilization. . . . . Serpent-worship unfortunately fell years ago into the hands of speculative writers, who mixed it with occult philosophies, Druidical mysteries, and that portentous nonsense called the Arkite Symbolism, till now sober students hear the very name of Ophiolatry with a shiver. Yet it is in itself a rational and instructive subject of inquiry, especially notable for its width of range in mythology and religion. We may set out among the lower races, with such accounts as those of the Red Indian's to the rattlesnakes, as grandfather and king of snakes, as a divine protector able to give fair winds or cause tempests: or of the worship of great snakes among the tribes of Peru before they received the religion of the Incas, as to whom an old author (Garcilaso de la Vega) says 'They adore the demon when he presents himself to them in the figure of some beast or serpent, and talks with them.' thenceforth such examples of direct Ophiolatry may be traced on into classic and barbaric Europe,* the great serpent which defended the citadel of Athens and enjoyed its monthly honey-cakes; the Roman genius loci appearing in the form of a snake; the old Prussian serpent-worship and offering of food to the household snakes; the golden viper adored by the Lombards, till Barbatus got it in his hands and the goldsmiths made it into paten and chalice. To this day Europe has not forgotten in nursery tales the snake that comes with its golden crown and drinks milk out of the child's porringer! the house-snake tame and kindly but seldom seen, that cares for the cows and children, and gives omens of death in the family; the pair of household snakes which have a mystic connection of life and death with the husband and housewife themselves. Serpent-worship, apparently of the directest sort, was prominent in the indigenous religions of South Asia. It now even appears to have maintained no mean place in early Indian Buddhism, for the sculptures of the Sanchi tope, show scenes of adoration of the five headed snake-deity in his temple, performed by a race of serpent-worshippers, figuratively represented with snakes growing from their shoulders, and whose raja himself has a five-headed snake arching hood-wise over his head. Here, moreover, the totem theory comes into contact with ophiolatry. The Sanskrit name of the snake 'nâga' becomes also the accepted designation of its adorers, and thus mythological interpretation has to reduce to reasonable sense legends of serpent races who turn out to be simply serpent-worshippers, tribes who have from the divine reptiles at once their generic name of Nâgas, and with it their imagined ancestral descent from serpents. In different ways these Nâga tribes of South Asia are on the one hand analogues of the Snake Indians of America, and on the other of the Ophiogenes or Serpent race of the Troad, kindred of the vipers whose bite they could cure by touch, and descendants of an ancient hero transformed into a snake.

---

* This does not mean that the European practices were derivations from America. The word 'thenceforth' relates to the writer's method – first treating of the lowest forms of Seppent-worship, and proceeding to those that may be called higher.

Serpents hold a prominent place in the religions of the world, as the incarnations, shrines or symbols of high deities. Such were the rattlesnake worshipped in the Natchez temple of the Sun, and the snake belonging in name and figure to the Aztec deity Quetzalcoatl; the snake as worshipped still by the Slave Coast negro, not for itself but for its indwelling deity; the snake kept and fed with milk in the temple of the old Slavonic god Potrimpos; the serpent-symbol of the healing deity Asklepios, who abode in or manifested himself through the huge tame snakes kept in the temple (it is doubtful whether this had any original connection with the adoption of the snake, from its renewal by casting its old slough, as the accepted emblem of new life or immortality in later symbolism); and lastly, the Phœnician serpent with its tail in its mouth, symbol of the world and of the Heaven-god Taaut, in its original meaning probably a mythic world-snake like the Scandinavian Midgardworm, but in the changed fancy of later ages adapted into an emblem of eternity. It scarcely seems proved that savage races, in all their mystic contemplations of the serpent, ever developed out of their own minds the idea, to us so familiar of adopting it as a personification of evil. In ancient times we may ascribe this character perhaps to the monster whose well-known form is to be seen on the mummy cases, the Apophis-serpent of the Egyptian Hades; and it unquestionably belongs to the Wicked Serpent of the Zarathustrians, Aji Dahaka, a figure which bears so remarkable a relation to that of the Semitic serpent of Eden, which may stand in historical connexion with it. A wondrous blending of the ancient rites of Ophiolatry with mystic conceptions of Gnosticism appears in the cultus which tradition (in truth or slander) declares the semi-Christian sect of Ophites to have rendered to their tame snake, enticing it out of its chest to coil round the sacramental bread, and worshipping it as the great king from heaven, who in the beginning gave to the man and woman the knowledge of the mysteries. Thus the extreme types of religious veneration, from the soberest matter-of-fact to the dreamiest mysticism, find their places in the worship of animals."

Fergusson says: * "There are few things in connexion with the ancient mythology of America more certain than that there existed in that country before its discovery by Columbus extreme veneration for the serpent. Whether or not this should be designated 'worship' is not so clear.

There are few things which at first sight appear to us at the present day so strange, or less easy to account for, than that worship which was once so generally offered to the Serpent God. If not the oldest, it ranks at least among the earliest forms through which the human intellect sought to propitiate the unknown powers. Traces of its existence are found not only in every country of the old world; but before the new was discovered by us, the same strange idolatry had long prevailed there, and even now the worship of the Serpent is found lurking in out-of-the-way corners of the globe, and startles us at times with unhallowed rites which seem generally to have been associated with its prevalence. . . . .

When it comes to be closely examined, the worship of the Serpent does not seem so strange as it might at first sight appear. As was well remarked by an ancient author, 'The serpent alone of all animals, without legs or arms, or any of the usual applicances for locomotion, still moves with singular celerity;' and he might have added—grace, for no one who has watched a serpent slowly progressing over the ground, with his head erect, and his body following apparently without exertion, can fail to be struck with the peculiar beauty of the motion There is no jerk, no reflex motion, as in all other animals, even fishes, but a continual progression in the most graceful curves. Their general form, too, is full of elegance, and their colors varied and sometimes very beautiful, and their eyes bright and piercing. Then, too, the serpent can exist for an indefinite time without food or apparent hunger. He periodically casts his skin, and, as the ancients fabled, by that process renewed his youth. Add to this his longevity, which, though not so great as was often supposed, is still sufficient to make superstitions forget how long an individual may have been reverenced in order that they may ascribe to him immortality. . . . .

When we first meet Serpent worship, either in the Wilderness of Sinai, the Groves of Epidaurus, in Sarmatian huts, or Indian Temples, the Serpent is always the Agatho-dœmon, the bringer of health and good fortune. He is the teacher of wisdom, the oracle of future events. His worship may have originated in fear, but long before we became practically acquainted with it, it had passed to the opposite extreme among its votaries. Any evil that ever was spoken of the serpent, came from those who were outside the pale, and were trying to depreciate what they considered as an accursed superstition. . . . .

---

* Tree and Serpent Worship, by James Fergusson, London, 1873, p. 38.

The essence of Serpent worship is as diametrically opposed to the spirit of the Veda, or of the Bible, as it is possible to conceive two faiths to be; and with unvarying degrees of dilution the spirit of these two works pervades in a greater or less extent all the forms of the religions of the Aryan or Semitic races." *

Prof. Putnam writes: † "That the serpent was prominent in the religious faiths of the Americans is beyond question, and that, to a certain extent, in combination with phallic and solar worship, it extended from Central America to Peru and Mexico, cannot be doubted, whatever its origin. Its existence is shown in Yucatan, as in Cambodia, by sculptures on the ruined buildings which can only be designated as temples. We know from history and art that this form of worship existed in Mexico down to the time of the Spanish invasion and conquest, and that it still survives in the rites of the Zunis and Moquis, and probably other of the Pueblo tribes.

In 1871, Mr. Phené made his discovery of an interesting mound in Argyleshire, Scotland, a figure and brief description of which are given by Miss Gordon Cumming in 'Good Words' for March, 1872. This work has so much in common with the Ohio serpent that Miss Cumming's illustration is here copied for comparison, and I give a brief abstract of her description:

'The mound is situated on a grassy plain. The tail of the serpent rests near the shore of Loch Nell, and the mound gradually rises seventeen to twenty feet in height, and is continued for three hundred feet, forming a double curve like a huge letter S, and wonderfully perfect in anatomical outline. This we perceive the more perfectly on reaching the head, which lies at the western end. . . .

'The head forms a circular cairn, on which at the time of Mr. Phené's first visit (several years previous) there still remained some trace of an altar. . . . which has since wholly disappeared, thanks to the cattle and herd boys. Mr. Phené examined the circular cairn or circle of stones, forming the head, and although it had been previously disturbed, he found three large stones form a megalithic chamber, which contained burnt bones, charcoal, and burnt hazel-nuts, and an implement of flint was also found during the examination. On removing the peat-moss and heather from the ridge of the serpent's back, it was found that the whole length of the spine was carefully constructed, with regularly and symmetrically placed stones, at such an angle as to throw off the rain. . . . The spine is, in fact, a long narrow causeway made of large stones, set like the vertebræ of some some huge animal. They form a ridge, sloping off at each side, which is continued downward with an arrangement of smaller stones suggestive of ribs. The mound has been found in such a position that the worshippers, standing at the altar would naturally look eastwards, directly along the whole of the great reptile, and across the dark lake to the triple peaks of Ben Cruachan. This position must have been carefully selected, as from no other point are the three peaks visible.'

---

* Fergusson p.p. 1-3.

† The Serpent Mound in Ohio, by F. W. Putnam, in the *Century*, April, 1890, p. 876.

General Forlong, in commenting on this, says:

'Here, then, we have an earth formed snake, emerging in the usual manner from dark water, at the base, as it were, of a triple cone, —Scotland's Mount Hermon,—just as we so frequently meet snakes and their shrines in the East.'"

Prof. Putnam then proceeds: "Is there not something more than co-incidence in the resemblances between the Loch Nell and the Ohio serpent, to say nothing of the topography of their respective situation? Each has the head pointing west, and each terminates with a circular inclosure, containing an altar, from which, looking along the most prominent portion of the serpent, the rising sun may be seen. If the serpent of Scotland is the symbol of an ancient faith, surely that of Ohio is the same."

APPENDIX C.

THE OLD BAY HOUSE.

During a conversation with Squire Thomson of Hiawatha he mentioned the former existence of an old log building which he believed to have belonged to the North West Company of Adventurers trading in furs, and although the place is of historical rather than of archœological interest, I accompanied him to the spot, about a quarter of a mile east of the Miller mounds. Bare as is the records of facts concerning this place, a statement of them here may elicit information from other sources.

As Mr. Thomson remembers the building twenty-five years ago, when the log walls, or portions of them, were still standing, the house would be about twenty by twenty-four feet, its length being in line with the lake shore. A fire-place and chimney of stone, and built in the old style, stood outside of the eastern gable. Here the stones now lie in a confused heap. This house was reported to be "always open," or, in other words, an "open house" for the convenience of traders following the established route of travel between the Huron country and Montreal. If this shelter had been much frequented by white traders, it was pretty certain that the floor area would contain some vestiges of their occupation. Portions of it were accordingly dug up, but with the exception of numerous fragments of Indian pottery, and a few flakes of flint, nothing appeared. Even the occurrence of the pottery could bear no relation to the use of the place by Indians, for they had ceased to use clay vessels of their own making, a hundred years and more before this house was put up. The only inference is that the Old Bay House was erected on the site of an Indian encampment, numerous examples of which exist along the lake shore.

John Howard, the oldest Indian on the Hiawatha Reserve was referred to as the man who could tell most about the house, but although I called three times to see him, I always found that he was out in his canoe, fishing.

Although there is no event of importance connected with this place, the existence of the North West Company forms a stirring chapter in Canadian history, and it is at least worth while noting that the Old Bay House stood here as a stopping place for the Indians, and perhaps for others, on their trading trips.

Not far away from the Old Bay House in a desolate and scraggy little grove on a hill-top over-looking Rice Lake, there stands a small monument over the grave of a Major St. Quintin who is said to have been engaged to one of Captain Anderson's beautiful half-caste daughters. She died of consumption and the Major remained about the place until his own death, many years afterwards.

The story of Captain Anderson's settlement on the reserve, forms an interesting episode in the local annals, and should be written by some one in Otonabee while it is possible to collect all the facts.

Military men ought to be interested in all that concerns British soldiers who have died here, and a record should be compiled relating to the resting-places of such departed veterans. The following is the inscription on the St. Quintin tombstone.

TO THE MEMORY OF

MAJOR FRANCIS JOHN ST. QUINTIN,

LATE OF THE 85TH REGIMENT.

YOUNGEST SON OF THE LATE

WILLIAM THOMAS ST. QUINTIN,

OF SCAMPTON HALL, YORKSHIRE,

ENGLAND.

WHO DIED ON THE 9TH DAY OF

FEBRUARY, A.D. 1857.

AGED 52 YEARS.

Sincerely regretted by all his

relations and friends.

APPENDIX D.

BIBLIOGRAPHY OF THE ARCHÆOLOGY OF ONTARIO.

By A. F. Hunter, M.A.

The initial work of this list was performed by A. F. Chamberlain, Ph. D., now of Clark University, Worcester, Mass., who made a bibliography including the whole Dominion of Canada (276 titles), published by instalments in our Second, Third and Fourth Reports. The titles referring to Ontario alone (100 altogether) have been collected by A. F. Hunter, M.A., from the previously published parts, and he has added to them upwards of 100 new titles, making a consolidated bibliography for the province. The titles originally given by Dr. Chamberlain are marked (C.), and those added by Mr. Hunter (H).

The boundaries of the province have not been arbitrarily followed in the preparation of the present list, but bordering districts, such as Montreal and Mackinac Islands, have been included.

It is hoped that this list, though not exhaustive, will facilitate the work of those who desire to cover the ground, or any part of it.

American Antiquarian.

Vol. xiv. (May, 1892), p. 184.

Mentions finds at Lake Nipissing. (H).

Anderson, Dr. (Director).

National Museum of Antiquities of Scotland. Catalogue, 1892.

Pages 113-115 contain comparative collection of 304 specimens from Canada, mainly Ontario, with counties given in most cases. (H).

Archæological Journal.

Published under the auspices of the Archæological Institute of Great Britain and Ireland. Vol. xviii. (London, (1861).

Contains (p. 374) brief note on fragments of pottery found beneath a pine tree near the Great ? (Grand) River, Canada. (C).

Ashford, Clarence W.

Historical sketch in Belden's Atlas of Simcoe county. Toronto, 1881.

This sketch appeared anonymously, but is known to have been writen or compiled by Clarence W. Ashford, since then Secretary of State, Hawaii, with emendations by Charles Pelham Mulvaney. It contains numerous references to the antiquities of Simcoe county. (H.)

Bain, James, jr.

The present condition of the old French Fort at Ste. Marie. Proc. Can. Inst., 3rd series, vol. iii., 1886, pp. 278-279.

Brief abstract of paper given. (C.)

The Hurons and French in the Early Days. pp. 165-8 in "The Northern Lakes of Canada" (guide-book). Toronto, 1886.

Contains references to Fort Ste. Marie on the Wye, and Huron remains in the vicinity. The same book (p. 87) has a reference to rock paintings near Longford. (H.)

Barrie Advance (Newspaper).

June 28, 1888.

Mentions skeletons and other remains found at Cameron's Point, Lake Simcoe. (H.)

Barrie Examiner (Newspaper)

October 17, 1895.

Describes ossuary in Flos township and its contents. See also Boyle's Report, 1894-5 (p. 42). (H.)

Barrie Gazette (Newspaper).

December 2, 1896.

Mentions a sword found in Simcoe county. (H.)

Bawtree, Ed. W., M D.

Indian Sepulchral Pits in Canada. Edinburgh New Philosophical Journal, vol. xlv.

See Squier, E. G., and Toronto Empire.

Describes six large ossuaries and their contents, etc., in Simcoe county. (C.)

Bayfield, Capt. Henry Wolsey, R.N.

Hydrographic Chart of Georgian Bay, 1823.

Mentions "Indian figures on the cliff," immediately west of the outlet of French River, three or four miles. (H.)

Beauchamp, Rev. W. M.

Indian Occupation of New York State. Science, vol. xix., p. 76, February 5, 1892.

Notices Huron ossuaries and towns in Ontario. Refers to the possible relation of a few earthworks near Prescott to those of St Lawrence county, N. Y., on opposite side of the river. (H.)

A catalogue of prehistoric works east of the Rocky Mountains. Compiled by Dr. Cyrus Thomas. Sixth annual report of the Bureau of Ethnology. Also reprinted separately.

The references to Ontario are by the Rev. W. M. Beauchamp. (H.)

Southern visits of the Eskimo. Proc. of the Am. Assoc., 1894, pp. 344-5.

Brief Abstract. Has references to Eskimo relics found here. (H.)

Iroquois Migrations. Proc. of the. Am. Assoc., 1894, p. 345.

Discusses the earliest position of the Hurons, etc. (H.)

Beeman, T. W., M.D.

Lanark county. Fifth Archæological Report, pp. 15-18, Toronto, 1891.

Gives kinds and descriptions of relics found there, and quantity of each kind. (H.)

Lanark county. Seventh Archæological Report, pp. 15-17. Toronto, 1894.

Describes specimens found, and gives a list of relics received for the Museum, with localities and names of donors. (H.)

Lanark county; pp. 71-72, Eighth Archæological Report, Toronto, 1896.

Describes work about the Rideau lakes during 1895. (H.)

Bonnycastle. Sir Richard H.

The Canadas in 1841. Two volumes. 1842.

Vol. ii., p. 31, mentions an ossuary, then lately discovered, near Yonge street, south of Barrie. Presumably it was the Cosgrove ossuary in West Gwillimbury township, and was visited by Bonnycastle in July, 1835. (H.)

Boyle, David.

Work and Play among the Indians, iii.; School Work and Play. Toronto. Vol. i. No. 6 (March 15, 1889) p. 6.

Describes, with illustrations, Indian pipes. Figures of "McCallum" pipe in shape of monkey, from Halton county; "Beecroft" pipe of bloodstone, from Nottawasaga; "McKnight" pipe of marble from Beverly township. (C.)

Indian Archæology. An article in the Toronto *Globe*, vol. xlvi., number 190, August 9, 1890.

Illustrated by thirty-five wood cuts of specimens in the Provincial Archæological Museum. (C.)

The Archæological Outlook. Proc. Canad. Inst., 3rd series, vol. iv. (1886), pp. 1-7.

At pp. 4-5 describes a find of seventy tomahawks in the township of Beverley ; at p. 5 an ossuary in the same district. (C.)

Report of Curator for 1885-1886. Proc. Canad. Inst., 3rd series, vol. iv (1886-7), pp. 208-210.

Enumerates specimens. (C.)

First Archæological Report, 1886-1887, being part of appendix to the report of the Minister of Education, Ontario, 1887, Toronto, 1888, pp. 9-58.

Describes, with 117 figures, part of the collection now in the Provincial Museum. Pages 9-14 describe Mr. Boyle's operations during 1887. Pottery, pp. 18-21 ; clay pipes, 22-24 ; stone pipes, 25-30 ; breastplates and gorgets, pendants, 30-33 ; ceremonial weapons, 33-36 ; totems, tribe-symbols, 36-38 ; slate spearheads, 38 ; grooved axes, 39 ; gouges, 40 ; tubes, 41 ; beads, 42-43 ; flints, 44-47 ; grinding and rubbing stones, 48 ; objects in shell, 49-50 ; bone bone and horn, 50-54 ; copper, 54-56. Village sites and ossuaries, 57-58, (See Hunter, A. F.) (C)

Second Archæological Report, pp. 9-59, for 1887-8. Being part of appendix to the report of the Minister of Education, Ontario, 1888. Published by order of the Legislative Assembly. Toronto, 1889 ; pp. 1-59, with eighty-four figures.

Pages 11-12, enumeration of Canadian specimens added to the museum ; pp. 20-22, clay pipes from Glenhuron, Nottawasaga, Lambton ; pp. 23-28, stone pipes from Frontenac, McGillivray, Lake Moira, London township, Hope Bay (Wiarton), West Williams township, Nottawasaga ; pp. 28-40 implements of stone from McGillivray, Scugog Island, West Middlesex, Nottawasaga, Point Edward, Biddulph, Toronto, Wolfe Island, West Williams, Vaughan, Fort McLeod ; pp. 40-41, shell gorgets, London (Ont.) ; pp. 41-45, flints from Wolfe Island, Fenelon Falls, etc. ; p. 46, carved stone head from Beverly township ; pp. 48 50, copper beads from Wolfe Island, Tidd's Island ; chisels from Biddulph, Burford and London townships ; pp. 51-53, types of recent iron axes from Nottawasaga, Toronto, etc. ; pp. 54-59, Bibliog. of the Archæology of Canada, I. (See Chamberlain, A. F.) (C.)

Third Archæological Report for 1888-9. Toronto, 1889, pp. 1-118.

Introductory remarks, pp 1-3 ; archæological remains in the Huron region, 8-15, with map of the township of Nottawasaga showing village sites, graves, and ossuaries, 9 ; and map of earthwork in the Township 11 ; detailed description of archæological investigations at village site at Clearville, Kent Co., 15-18 ; with map, 16 ; township of Humberstone, 18 ; York and Vaughan, 19 20 ; archæological notes, 21-42 ; with 39 figures, pottery, 21 23 ; clay pipes, 23-27 ; stone pipes, 28-31 ; bone and horn implements, 31-34 ; flint 35 ; stone tubes, 35 ; other stone specimens, 36-37 ; mortars, 38 ; copper implements, 39-40 ; crania (with figure), 41 ; modern Indian dresses, 42 ; French relics from village sites of the Hurons, 42-46 (see Hunter, A. F.) ; exhaustive catalogue of specimens in the Provincial Archæological Museum, 48-101 ; Bibliog. of the Archæology of Canada, II., 102-118 (see Chamberlain, A. F.). (C.)

Fourth Archæological Report (1890). Toronto, 1891. 90 pp. Being an Appendix to the Report of the Minister of Education, Ontario. 162 illustrations.

Introductory remarks, pp. 5-7 ; pp. 8-23 describe Mr. Boyle's operations during 1890, as follow : The Southwold earthwork, 8 ; Tuscarora and Oneida, 10 ; Balsam Lake, 12 ; Lake Weslemkoon (Hastings Co.), 14 ; Midland, 17 ; Sainte Marie on the Wye, 18 ; Parry Sound, 19 ; Parry Island, 20 ; Point Abino, 21. Notes on porcupine quill work, 23 (with lithograph on opposite page) ; invitation quills, 24 ; pottery, 24-29 (with three full-page plates showing 62 patterns) ; clay pipes, 29-35 ; stone pipes, 35-40 ; hammer stones, 41-43 ; game disk, 43 ; figured tool, 43 ; flaked stones, 44 ; stone cup, 45 : amulets or gorgets, 45-48 ; stone carving, 48 ; disks, 49 ; totem, 49 ; slick stone, 50 ; shell utensils, etc., 50-53 ; bone, 54 ; Ojibwa game, 55 ; horn, 56 ; unfinished relics, 57-59 ; copper 59-63 ; post-European relics, 64-68. Extract, 68-71 : Account of the Maquas (Mohawks) by John Megapolensis, jr. Tribal names, 71-73. Balsam Lake, by George E. Laidlaw, 73-77. Bibliog. of the Archæology of Canada III., 78-82, by A. F. Chamberlain. The Algonkian Indians of Baptiste Lake (Hastings Co.) by A. F. Chamberlain, 83-90. (H.)

Fifth Archæological Report. Being an Appendix to the Report of the Minister of Education, Ontario. 102 pp., 131 illustrations. Toronto, 1891.

Introductory remarks, 5-6. Notes : palæoliths, etc., 7-10 ; pp. 11-15 describe Mr. Boyle's operations during 1891, as follow : Southwold earthwork, 11 ; Malahide, 11-12 ; Camden, 12 ; Williamsburgh, 13 ; Herschell, 13-15 ; Lanark County, by Dr. T. W. Beeman, 15-18 ; additions to the museum, 18-22. Notes : pottery, 23-26 ; clay pipes, 26-28 ; stone pipes, 29-33 ; flaked implements, 34-36 ; celts, chisels, gouges, 36-38 ; various slate specimens, 39-42 ; finger ring, 43 ; rubbing tools, 43 44 ; bone and horn, 44-49; shell, 50; wood, 50; iron tomahawk, 51 ; copper, 51 ; British Columbia specimens, 52-56 ; Crania, 57 ; Cranial Measurements, by Dr. Susanna P. Boyle, 57-102. (H.)

Sixth Archæological Report. Being an Appendix to the Report of the Minister of Education, Ontario ; 34 pp., 15 illustrations. Toronto, 1893.

By a mistake in printing, the title page of this publication was "Fifth Report." General Remarks, pp. 1-3. Notes, 3-6 ; catalogue of specimens on exhibition at the World's Fair, Chicago. from the Ontario Archæological Museum, 7-14 ; methods of working, 15 ; clay pipes, 15-16 ; stone pipes, 16-19 ; gorgets, 19-20 ; bone, 20 ; copper, 21. The Southwold Earthwork and the Country of the Neutrals, by James H. Coyne, B.A., 22-34. (H.)

Seventh Archæological Report. Being part of Appendix to the Report of the Minister of Education, Ontario ; 22 pp. and 8 figures. Toronto, 1894.

Annual Report, 5 ; Exhibit at the Columbian Exposition, 6 ; additions to the Museum, 7 ; notes, 9 ; ancient Mexican relics added to the Museum (with seven illustrations) 9-14 ; Lanark County, by Dr. T. W. Beeman, 15-17 ; Balsam Lake (with map showing village sites, graves, etc.), by George E. Laidlaw, 17-22. (H.)

Notes on Primitive Man in Ontario. Appendix to the Report of the Minister of Education, Ontario ; 98 pp., 263 illustrations. Toronto, 1895.

This publication is a summary of the seven Annual Reports preceding it. It discusses : Whence came the Indians, 5-11 ; Aborigines of Ontario, 12 ; social condition, 14 ; food, 16 ; religion, 17 ; medicine men, 18 ; secret societies, 19 ; burial customs, 19 ; earthworks, 20 ; pottery, 21 ; clay pipes, 32 ; flaked tools, 41 ; stone pipes 48 ; stone hammers, 56 ; stone axes or celts, 57 ; chisels, 59 ; gouges, 60 ; slate knives, 61 ; shell objects, 63 ; "ceremonial" objects, 65 ; stone tubes, 69 ; bone tools, etc., 72 ; horn implements, 79 ; teeth, 81 ; totems, 81 ; miscellaneous, 82 ; stone carving, 84 ; copper implements, etc., 85 ; stone discs, 90 ; Conclusion, 91 ; Extracts from Travels of Peter Kalm, 93-98. (H.)

Eighth Archæological Report. Appendix to the Report of the Minister of Education, Ontario ; 80 pp., 66 illustrations. Toronto, 1896.

Presentation, p. 5 ; accessions to the Museum, 7 ; primitive industries and working methods, 29 ; pp. 33-54 describe Mr. Boyle's operations during 1895 in the counties of Waterloo, 34 ; Middlesex, 35 ; Victoria, 40 ; Lanark, 41 ; Durham, 41 ; Simcoe, 42; rock paintings at Lake Massanog (Addington Co.) 46; Lanark Co., 51; flints, 54; slate tools, 56; a well-worn adze, 58; clay pipes, 58; stone pipes, 60; pendants, 62; gorgets or amulets, 62; bird amulets, 64; banner stones, 64; women's knives, 65; tubes of stone, 66; small handle-holed hammer, 67; gouges, 68; new form of stone relic, 68; perforated bone awl and bone bangles, 69; Indian armor, 69; Lanark County, by Dr. T. W. Beeman, 71-72; Cave-dwellings, 72. Two Ontario Caves, by R. D. Meyers, 73-74. Extracts of short Historical and Journal Notes, by David Pietersz, De Vries, 1665, 75-79. (H.)

"Before the White Man," Chap. II. in the History of Scarboro.

Refers to Huron Iroquois and Algonkins as former occupants of Scarboro territory; reviews some of their customs, and mentions localities in the township where Indian villages stood.'

Boyle, Susanna P., M.D., M.C.

Cranial Measurements. Fifth Archæological Report, pp. 57-102. Toronto, 1891.

Gives measurements of some 41 crania in the Archæological Museum, taken with the assistance of Dr. Letitia K. Meade. (H.)

Bressani, J.

Relation Abrégée de quelques Missions des Pères de la Compagnie de Jésus dans la Nouvelle France; par le R. P. F. J. Bressany, de la même Compagnie. Traduit de l'Italien et augmenté d'un avant-propos, de la biographie de l'auteur, et d'un grand nombre de notes et gravures, par le R. P. F. Martin de la même Compagnie. Montreal, 1852.

Chapter III. (pp. 66-78) treats of the "Sol, Nourriture, Vêtement et Caractère des Sauvages de la Nouvelle France;" Burial customs and rites of the Hurons, 101-103; Notes on Wampum, 301-302. The work contains (p. 50) "Tabula Novae Franciae anno 1660," and (p 280) "Carte de l'ancien pays des Hurons," besides numerous engravings; pp. 330-333 are taken up with explanatory notes on the maps and engravings. On p. 101 is a note relating to an ossuary discovered near Penetanguishene in 1846, and on p. 333, references to the ruins of Fort Ste. Marie on the Wye. (See also Martin, Rev. Felix.) (C.)

Brinton, D.G., M.D.

Lenâpé Conversations. Journal of American Folklore, Vol. i., 1888, pp. 37-43.

Conversations with the Rev. A. S. Anthony, a Canadian Delaware Indian. Notes on weapons, 38-39; utensils, 39; boats, 40; houses, 50; games, and implements used in them, 40; hooks, 41; sweat lodges, 41; trephining, 41. (C.)

British Colonial Newspaper.

September 24, 1847.

Contains accounts of the discovery and character of Indian ossuaries. (Title from Squier's Antiquities of the State of New York, p. 100). (C.)

Brown, Wm.

"Four years in Canada and the United States." Leeds, 1849.

Refers to the finding of Indian skeletons on the banks of the River Rouge.

Bryce, Rev. Prof. Geo. LL.D.

The Winnipeg Mound Region: Being the most northerly district where mounds have been examined on the American continent. Proc. of the Am. Assoc., 1889, pp. 344-5.

Abstract of paper; has references to the Rainy River Mounds. (H.)

Trans. Manitoba Hist. and Scientific Soc'y. No. 18. "The Mound Builders."

Describes the mounds of Rainy River. (H.)

Campbell, Prof. John, LL.D., F.R.S.C.

The American Indian: What and Whence? (Canadian Magazine, Vol. ii., No. 4, Feb. 1894, pp. 305-319).

Notices of Western Ontario mounds at p. 309, and other archæological features. (H.)

Canadian Antiquarian and Numismatic Journal, The.

Published quarterly by the Numismatic and Antiquarian Society of Montreal. Vol. iii. (1874-5) pp. 110-112.

Interpretation of Indian wampum belts. Interpretation of three belts of wampum sent to Canada by the Mohawks in 1639. (See Lit and Hist. Soc. of Quebec.) (C.)

Vol. iii. pp. 167-169.

Indian dress, love-making, feasts, burials, from MS. letter of Soeur Ste. Hèlène, published by Abbe Verran. (See Revue Canadienne, Feb., 1875, pp. 108-9.) (C.)

Canadian Indian, The. (Sault Ste Marie)

Vol. i., Nos. 1-12 (Oct. 1890—Sept. 1891.)

Its publication ceased at the end of one year. Contains (pp. 6-7) a few remarks on mounds, burial places, etc. Indian Sepulture, p. 62. Canadian Mound-builders, pp. 94, 101, 138, 203, 238. A fishing station of the Ancient Hurons identified. By Joseph Wallace, Sr., 134 Indian remains near Sarnia, 299. (C. H.)

Canniff, William, M D.

History of the Settlement of Upper Canada, with special reference to the Bay of Quinte District. Toronto, 1869, xxi., 671.

Notes p. 380, site of Indian village at Cataraqui; batt'eground, p. 398; island scene of massacre, 407. (C.)

Carroll, Rev. John.

Case and his Cotemporaries. Vol i. (1867).

At pp. 164-5 is a description from Rev. Dr. Reed of Indian remains at the north end of Burlington Beach; artificial excavations, quantities of human bones, stones, arrow-heads, hatchets, etc., and a large burial mound. (Also described in Jones' "History of the Ojibways," p. 112. (H.)

Carruthers, John

Retrospect of Thirty-six Years' Residence in Canada West. Hamilton, 1861.

Mentions at p. 231 an Indian burial ground on the Holland River, Simcoe county. (H.)

Chamberlain, A. F., M. A., Ph.D.

The Archæology of Scugog Island. Port Perry *Standard*, March 7, 1889, p. 2.

Describes graves, and camp or village sites, on Noncon Island, (part of Scugog Island), Lake Scugog, Ontario county, with specimens obtained therefrom. (C.)

Contributions towards a Bibliography of the Archæology of the Dominion of Canada and Newfoundland, I.

(See Boyle, D.—Second Archæological Report. Contains seventy-four titles, of which thirty-four relate to Ontario. (C.)

Contributions toward a Bibliography of the Archæology of the Dominion of Canada and Newfoundland, II. (Third Archæological Report, pp. 102-118).

Contains 160 titles of which fifty-six relate to Ontario. (C.)

Contributions toward a Bibliography of the Archæology of the Dominion of Canada and Newfoundland, III. (Fourth Archæological Report, pp. 78-82.)

Contains forty-two titles, of which fourteen relate to Ontario. (H.)

Notes on the history, customs and beliefs of the Mississagua Indians. Journal of American Folk-Lore. Vol. i., 1888, pp. 150-160.

Describes, p. 154, method of fishing; p 155, gathering and drying rice; p. 156, manufactures. (C.)

The Algonkian Indians of Baptiste Lake. Fourth Archæological Report, Toronto, 1891, 83-90.

Describes the customs, language, etc., of the small band there, visited in September, 1890. (H.)

Copway G.

Traditional History of the Ojibway Nation (1850).

At p. 87, etc., appears notice of remains in Percy township, Northumberland county, and probable explanation of their origin. (H.)

Coyne James H., B.A.

The Southwold Earthwork and the Country of the Neutrals, pp. 22-34, in Sixth Archæological Report. Toronto, 1893.

A digest of the information, in regard to the Neutrals, contained in Champlain's works, Sagard's History, the Relations and Journal of the Jesuits, and Sanson's map of 1656; and considered in reference to the aboriginal remains found in the Neutral Country. (H.)

The Country of the Neutrals (as far as comprised in the County of Elgin) from Champlain to Talbot, 44 pp., with facsimile of Galinee's map of 1670. St. Thomas, 1895.

A reprint in pamphlet form (as far as page 22) of the foregoing article with revisions. The added material (pp. 22-44) brings the history of the district down to 1803. (H.)

Creemore Star.

June 12, 1890.

Describes at some length a find of Indian relics in Nottawasaga township. (H.)

September 21, 1893.

Mentions finds in Nottawasaga townsship. (H.)

Croft, Henry, LL D.

Report on implements found near Brockville. Canadian Journal, new series, vol. i. (1856), pp. 334-336. See Reynolds, Thos.

Chemical analysis of copper implements. (C.)

Dade, Rev. C.

Indian remains. Canadian Journal, vol. i. (1852-1853), p. 6.

Describes an Indian burying ground in Beverly township, some ten miles from Dundas. (C.)

Dawson, Sir John William, M A, LL D, F.R S, etc.

On a specimen of Aboriginal Pottery in the Museum of the Natural History Society of Montreal. Canadian Naturalist and Geologist and proceedings of the Natural History Society of Montreal, vol. iv. (1859) pp. 186-190 (with figure, p. 188). Article is signed "J. W. D."

Describes earthen vessel found on lot 4, 8th range of lots in Clarendon township, Frontenac county, in July, 1859, together with stone enclosure. (C.)

Notes on Aboriginal Antiquities recently discovered in the Island of Montreal. *Ibid.* vol. v., 1860, pp. 430-449. Signed "J. W. D."

Describes, pp. 432-434, skeletons, skulls (with figure p. 433), remains of articles of food, 434; earthen vessels, 434-5, with six figures on p. 435; tobacco pipes, 435 (with figure of clay pipe, p. 436); other earthen objects, p 435-6; bone implements, 436-7 (with figure of awl, p. 437); iron implements, 437 (with figure of knife); historical importance of discoveries, 437-49; plan of Hochelaga from Ramusio, 446. (C.)

Additional Notes on Aboriginal Antiquities found at

Montreal. *Ibid.* vol. vi., 1861, pp. 362-373. Signed "J. W. D."

Treats of articles found on site of Indian village, near Metcalfe St., Montreal. Human remains, pp. 364-369; beads and wampum, 369 (with two figures); bone implements, 369-370 (with three figures); pipes, 370-371 (with two figures); earthen vessels, 371-372 (with one figure); stone implements, 372; metallic articles 372; articles of food, 373. (C.)

Notes on Indian Beads presented to the Natural History Society, by James Robb, Esq., Mining Engineer. *Ibid.* vol. vi. 1861, p. 471. Signed "J. W. D."

Describes beads of native copper found in an old burying-place on a small island in the St. Lawrence, near Brockville. (C.)

Fossil Men and their modern Representatives. An attempt to illustrate the characters and condition of pre-historic men in Europe, by those of the American Races. Illustrated. London (1880).

Has numerous references to the relics, etc., found at Hochelaga. Describes many features of Ontario Archæology. (C.H)

Dawson, Geo. M., LL.D., F.G.S.

Sketch of the past and present condition of the Indians of Canada. Canadian Naturalist and Geologist. New series, vol. ix. (1881) pp. 129-159. (C.)

Ducreux, Father.

Historia Canadensis. (1660) (Creuxius.)

Contains the only map (a little diagram in the corner of a large map) that lays down the positions of the Huron villages. It was reproduced in Canadian Journal, vol. ii. (second series) p. 402. (H.)

Duns, Prof.

On Stone implements from Nova Scotia and Canada. Proc. of Soc. of Antiq. of Scot. New Series, vol. iii. (1879-80). Edinburgh, 1880, pp. 176-180.

Describes porphyrite scraper, etc., from Lake Superior, and arrow-heads from Canada West. (C.)

Fairbank, Dr. F. R.

On some flint arrow-heads from Canada. Journ. Anthrop. Soc. London, vol. ii. (1864), pp. 64-65. Bound up with Anthrop. Rev., vol. iv. (1864).

Deals with some arrow-heads ploughed up on the shore of Lake Erie. (C.)

Galt, John.

Autobiography.

At p. 140, vol. ii., mentions, upon the authority of Mr. Ridout, an enclosure on the Oak Ridges, near Yonge Street. (H.)

Gibb, Sir George Duncan.

Stone implements and fragments of pottery from Canada. Report of Proc. of Brit. Assoc. for Adv. of Science. Forty-second meeting, 1872, p. 186. (C.)

Stone implements and fragments of pottery from Canada. Journ. Anthrop. Inst. of Gt. Brit. and Ireld., vol. iii. (1874), pp. 65-69, and 2 plates.

Describes arrow-heads from Quebec, Island of Montreal, Saguenay District, Ottawa River and Chippewa (Ont.); pottery from Lake Erie, Montreal Island and Brant county; hatchets from Niagara; spear-head from the Saguenay. (C.)

Canadian stone implements and fragments of pottery, pp. 181-185. Canad. Antiq. and Numism. Journal, vol. iii. (1874-5).

Describes, 182-3, two spear-heads from Saguenay District, two hatchets from Niagara Falls, one from Chippewa, four from Niagara. one from Ft. Wm. Henry, and one from Quebec; 183-4 three fragments of pottery, one from north shore of Lake Erie, and two from the Island of Montreal. (C.)

Glyndon, M. W.

The Mound Builders. The Indian (Hagersville) p 2, Feb. 3; p. 37, Mar. 3.

Has general remarks on the Lake Superior Copper Mines, worked by the aborigines. (H.)

Greene, W.

On some processes in use among the Hurons (of Lorette) in dyeing. Trans., Lit. and Hist. Soc. of Quebec, vol. ii., (1831), pp. 23-25. (C.)

Notes respecting textile substances in use among the North American Indians. *Ib.*, pp. 310-312. (C.)

Guest, E. W.

Ancient Indian remains near Prescott, C. W. Ann. Report Smithson. Inst., 1856, pp. 271-276, with eleven figures.

Describes mounds in Augusta Township, eight and one-half miles northwest of Prescott, Ontario, and similar structures near Spencerville. (C.)

Hale, Horatio, M.A.

On the nature and origin of Wampum. Report of Proc. of Brit. Assoc. for Adv. of Science. Fifty-fourth meeting (Montreal, 1884), London, 1885, pp. 910-911.

(Abstract). General Notes. (C.)

In "Magazine of American tory," vol . (1883) p. 479.

Notices a curious carved oak image of Sastaretsi, "king" of the Wendats or Hurons. (C.)

The origin of Primitive Money. Popular Science Monthly, Jan. 1886, pp. 296-307.

Discusses the origin, use, distribution, etc., of wampum, shell money, etc., with numerous illustrations pp. 303, 305, 306. (C.)

Indian Migrations, as evidenced by language. Read before the Am. Assoc. in Montreal, 1882. Issued in pamphlet form.

Mr. Hale conjectures that the Hurons took their rise in Eastern Canada. (H.)

The Fall of Hochelaga. Journal of American Folk-Lore. Jan.-Mar., 1894.

Discusses early Huron migrations. (H.)

Iroquois Book of Rites.

Describes the Wampum belts of the Mohawks near Brantford, and other interesting archæological features. (H.)

Hall, Capt Basil, R.N.

Travels in North America in 1827-8. Three vols., 1829.

At p. 263, vol. i., he describes the annual distribution of presents at Holland Landing in 1827, with minute accounts of the ear-rings, necklaces and other ornaments worn by the Ojibways on that occasion. (H.)

Hamilton, J. C., LL.B.

The Georgian Bay.

Contains numerous references to the antiquities of that district. (H.)

Harris, Very Rev. W. R.

History of the early missions in Western Canada. Toronto, 1893.

Huron rites noticed at pp. 41-2. (H.)

"The Flint Workers," chap. v. in "The Catholic Church in the Niagara Peninsula," (Toronto, 1895).

Discusses Neutral Remains, the Tobacco Nation, the Five Nations, Wars of the Neutrals, Population, Flint Workers, Wood and Bone Carvers, Neutral Wigwams, Building of the Long-house, Mechanical

Skill, Weaving and Mat-making, Tanning, Tally-bones, Beginnings of Literature, Wampum Belts, Pipes, and the Shamans or Medicine-men, with numerous illustrations. (H)

Harvey, Arthur.

The first shot fired in war in Canada. The Indian (Hagersville), Feb. 3, p. 3 and p. 26, Feb. 17.

Describes Champlain's tour through Ontario, etc., in 1615-6 , with references to Ontario tribes as Neolithic. (H.)

Wanted; the Indians' account of themselves from 1650 to 1700. The Indian (Hagersville), Dec. 22, p. 249.

References to the Iroquois-Chippewa wars about Georgian Bay, subsequent to 1650. (H.)

Allumette Island. Magazine of American History (1887).

A paper on the archæological features, etc., of that part of the Ottawa Valley. (H.)

Henry, Alex.

Travels and Adventures in Canada (1809).

At p. 111 mention is made of the skull cave on Mackinaw Island. (H.)

Hind, Henry Yule, M.A., F.R.G.S.

Narrative of the Canadian Red River exploring expedition of 1857, and of the Assiniboine and Saskatchewan exploring expedition of 1858, London, 1860. Two vols. Vol. i, pp. xx, 494. Vol ii., pp. xvi., 472.

Vol. i., pp. 89-90, describe Indian mounds near Long Rapids, Rainy River; description and discussion of Wampum, 417-420, (references to Lafitau, Sagard, Champlain and Bressany).

Vol ii., figures of tobacco pipes of the Ojibways of Rainy Lake, p. 139; Huron ossuaries, 165, etc. (C.)

Hirschfelder, C. A.

Gi-ye-wa-no-us-qua-go-wa, Sacrifice of the White Dog. The Indian, pp. 73-74, 86-87, 98-99 (1886).

General description of sacrifice of White Dog by the Canadian Onondagas. Describes preparation and adorning the dog, p. 86. (C.)

A Ceremonial Ornament. The Indian. March 17th, 1886, (No. 5) p. 49.

Describes a stone found on Christian Island, Georgian Bay, semi-circular, with hole through the centre. (C)

Anthropological Discoveries in Canada. Read before the Canadian Institute Nov. 18, 1882.

This paper appeared in the Toronto *Mail* Dec. 2, 1882. It deals with the ossuaries of Simcoe Co. (C.)

The Practical and Theoretical Study of Anthropology. Read before the Canadian Institute March 31, 1883.

This paper appeared in the Toronto *Mail* April 14, 1883. (C.)

Anthropological Discoveries in Canada. Report of proceedings of British Association for Advancement of Science. Fifty-fourth meeting (Montreal, 1884), pp. 915-916.

[Abstract.] Brief general description of forts, burial places, ossuaries, archæological relics. (C.)

Burial customs of the Hurons. Proc. of the Am. Asso., 1891, pp. 363-5.

Mentions ossuary burials, mounds and single graves. Reprinted in *The Week* (Toronto). (H.)

Ancient Earthworks in Ontario. Proc. of the Am. Assoc., 1892, pp. 289-90.

Brief abstract. An abridgement of this paper appeared in The American Antiquarian, Jan., 1893, vol. xv., No. 1, pp. 42-45. Describes earthworks in South Orillia; on a small island in Lake Couchiching; in Lambton, Elgin and York counties. (H.)

Evidences of Prehistoric Trade in Ontario. Proc. cf the Am. Assoc., 1892, p. 290.

Brief abstract of paper given. (H.)

History of the County of York.

C. Blackett Robinson, publisher, Toronto, 1885. Two vols.

Describes (vol. i., p. 107) Indian sites at River Rouge, Greenvale and Claremont in Pickering Township; village site on lot 9, con. 8, Whitchurch, opened in 1848, pp. 148-149; on lot 16, con. 6, pp. 149-150; site near Aurora, p. 150. (C.)

Holmes, W. H.

Sacred Pipestone Quarries of Minnesota and ancient Copper Mines of Lake Superior. Proc. of the Am. Assoc., 1892, pp. 277-9.

Describes Aboriginal mines on Isle Royale. (H.)

Hough, Walter.

Aboriginal Fire-making. American Anthropologist, Washington. Vol. iii., 1890, pp. 359-371.

Contains description of Huron fire-making from Lafitau (p. 362), figure of pump-drill used by Onondaga Indians of Canada in 1888 (p. 364) with description of same (p. 365). (C.)

Hunter, A. F., M.A.

Ahoendoe, the last refuge of the Hurons. The Indian (Hagersville), vol. i., p. 217 (1886).

Describes flight of the Hurons (after attack of Iroquois in 1649) to the island of Ahoendoe (Christian Island) in Georgian Bay, and the relics found there. Ruins of fort, stone enclosures, pottery, etc. (C.)

Villages and ossuaries of the Hurons. First Archæological report, 1886-7. Toronto, 1888.

General description and enumeration of Huron village sites in Simcoe Co., p. 57; description of ossuaries and remains found therein, p. 58. (C.)

French relics from village sites of the Hurons. The geographical distribution of these relics in the counties of Simcoe, York and Ontario. Third Archæological report, 1888-9. Toronto, 1889.

Pp. 42-46. This paper discusses in detail the important question of the distribution of French relics in the Huron region, with a tabulated statement showing their locations. (C.)

National characteristics and migrations of the Hurons as indicated by their remains in North Simcoe.

Read before the Canadian Institute, Sept. 25, 1891. Transactions of the Canadian Institute, (fourth series), vol. iii., pp. 225-228, with map. Toronto, 1893. (H.)

Indian, The (Hagersville, Haldimand Co) edited by Dr. P. Jones.

(Dec. 30, 1885, to Dec. 29. 1886) Nos. 1-24, 264 quarto pp.

The publication of this journal lasted but one year, that above defined. It contained useful archæological notes, the more important as follow:

The Ontario Archæological Museum. Circular of David Boyle, curator. No. 1 (Dec. 30, 1885,) p. 6.

The first shot fired in war in Canada, by Arthur Harvey. (Feb. 3, p. 3 and p. 26, Feb. 17). Describes Champlain's tour of 1615, with references to Ontario Indians as Neolithic tribes.

The Mound Builders, by M. W. Glyndon (Hamilton), p. 2, Feb. 3, p. 37, March 3. General remarks on the Lake Superior copper mines.

Grant asked for a Provincial Museum, p. 85.

A Ceremonial Ornament, by C. A. Hirschfelder, p. 49, March 17. Describes a specimen fonnd on Christian Island, Georgian Bay.

Short note on discovery of Indian skeleton at Adolphustown, p. 49, March 17.

American Antiquities, pp. 50, 61.

Mound Builders (Rainy River), p. 51.

Gi-ye-wa-no-us-qua-go-wa, sacrifice of the white dog. By C. A. Hirschfelder, pp. 73-74, pp. 86-87, pp. 98-99.

Short note on discovery of Indian skeleton with Queen Elizabeth musket, kettle, etc., in 7th concession, London township, p. 82.

Short note on Ossuary, in Markham township, p. 102.

How our ancestors wrote. Picture writing, pp. 137, 149, 163, 176, with specimens.

Old Indian Relics—Interesting discovery in Tiny township (Simcoe Co.) p. 143.

Indian Relics. Find at Withrow ave., Toronto, p. 158.

Short note on Northern Algonquin custom of building fires on newly made graves, p. 187.

Ahoendoe, the last refuge of the Hurons, by A. F. Hunter, p. 217.

Discovery of Indian graveyard in Biscuiting Island, Lake Nipissing, p. 247. (C., H.)

Irish, William C.

In report of Smithsonian Institution, 1879, p. 448.

Reports that mounds and graves occur two miles east of Brighton, on Presqu'ile Point; similar mounds are on Reddick's farm, four miles west of the first mentioned. (C.)

Jameson, Mrs.

Winter Studies and Summer Rambles in Canada. London, 1838. Three vols.

Describes (vol. iii., p. 324) Indian graves; "Island of Skulls," an ancient sepulchre of the Hurons, Georgian Bay, p. 327. (C.)

Jones, Rev. Peter.

History of the Ojebway Indians, 1861.

Chap. v. (pp. 70—), mode of life, wigwams, ancient domestic implements, mode of travelling dress; mode of burying the dead (98-100); reference to Skull Island, Georgian Bay (112); weapons of war (131-2); amusements (134-5); wampum (139-140). The following plates accompany the work: Opp. p. 73, plate containing figures of pottery and pipes; p. 83 and p. 85, idols; p. 99, Muncey graves; 131, weapons; 135, drums, rattles, etc.; 145, implements of medicine men. (C.)

Life and Journals of Kah-ke-wa-quo-na-by. (Rev. Peter Jones), Wesleyan missionary. Toronto, 1860.

Pages 43-4, description of Pagan "Temple" at Munceytown; pp. 233-4, ornaments; p. 242, deer-fence; p. 385, reference to Skull Island, Georgian Bay. (C.)

Journal of Education for Upper Canada.

Edited by the Rev. Egerton Ryerson, D.D., chief superintendent of schools, assisted by Dr. J. George Hodgins, deputy superintendent. Vol. xviii. (1865). Toronto, 1865.

Canadian Archæology, pp. 3-4; general remarks on the Huron-Iroquois, p. 3; relics discovered in Hospital street, Montreal, 4; Village of Hochelaga, 4; notice of relics discovered in Augusta township, near Prescott, mounds, tumuli, etc., 4; near Spencerville, in Edwardsburgh township, similar to foregoing, pottery, etc. (C.)

Ditto. Edited by the Rev. Egerton Ryerson, D.D., chief superintendent of schools, assisted by Dr. J. George Hodgins, deputy superintendent. Vol. xiv. (1861), p. 16.

Short note on Indian relics discovered at Montreal. (C.)

Kalm, Peter.

Travels into North America. Three vols. London, 1770.

Passim. The Hurons, p. 178, vol. iii. Various items reprinted in "Primitive Man in Ontario." (Boyle.) (H.)

Kelton, Dwight H, Capt.

Annals of Fort Mackinac.

Describes prehistoric remains of Mackinac Island. (H.)

Kennedy, Wm.

Some Evidences of Commercial Transactions in Prehistoric Times. A paper read before the Hamilton Association, 1885-6.

Describes, generally, the evidences in Europe and America. At pp. 26, 31 are references to finds in Beverly township. (H.)

Kohl, J. G.

Kitchi Gami. Wanderings round Lake Superior (Trans. Lascelles Wraxall). London, 1860, pp. xii, 428.

Contains very full descriptions of the Chippeway (Ojibwa) customs, etc., around Lake Superior. (C.)

Laborbeau, Rev. Th. F.

Reminiscences of the Huron Missions. Proc. Can. Inst., 1887.

Abstract given of paper which embodies some of his investigations of Huron sites. (H.)

Lafitau, P.

Mœurs des Sauvages Ameriquains. Four vols. Paris, 1724.

Contains much interesting material concerning Indian manners and customs, weapons, etc. (H.)

La Hontan, M. Le Baron de.

Nouveaux Voyages dans l'Amérique Septentrionale, etc. A la Haye, 1703. Two vols.

Vol. i. Facing p. 35, full page illustration of Iroquois bark canoe and paddle, description of same, p. 35; pp. 47-8, calumet de paix; p. 48, collier, belts of wampum; facing p. 73, figure of snowshoes (raquettes), description, 73-4.

Vol. ii. Title is: Memoirs de l'Amerique Septentrionale ou la suite des Voyages de M. le Baron de Lahontan; pp. 151-2, burial; facing p. 175, figures of bow, arrow and tomahawks; facing p. 189, totems of Hurons, Ouataouas, Nadouissis (Sioux), Ilinois; armours, 189-91; facing p. 190, totem of Outchipoues (Sauteurs), Outagamis, Oumamis, Pouteouatamis; opp. p. 191, full page of "Hieroglyphes," with explanations on pp. 191-4. (C.)

Laidlaw, George E.

Balsam Lake, pp. 73-77, Fourth Archæological Report. Toronto, 1891.

Describes village sites, camp sites, etc., along the old Huron trail from Balsam Lake to Lake Simcoe, and on the islands in the former. Also describes relics found at these sites and in the vicinity. (H.)

Canadian Relics. The American Antiquarian. Vol. xiii., p. 113. (H.)

Balsam Lake, pp. 17-22. Seventh Archæological Report.

The map accompanying this article shows village sites, graves, etc., in the vicinity of Balsam Lake. A discussion of these is given, and descriptions of relics found at various places shown on the map. (H.)

Aboriginal Remains of Balsam Lake. The American Antiquarian. Vol. xviii., p. 276. (Sept., 1896.) (H.)

Lang, J. D., D.D.

Origin and Migrations of the Polynesian Nation. First edition, 1834.

Brief reference to earthwork near Lake Simcoe in foot note to p. 109. Note not in second edition. (H.)

Langton, John, M.A.

On the early discoveries of the French in North America. *Canadian Journal*, November, 1857.

Accompanied by a reprint of Ducreux's map of the Huron villages. (H.)

Laverdiere, l'Abbe.

Œuvres de Champlain, publiées sous le patronage de l'Université Laval. Four vols., 1870.

The editor, l'Abbe Laverdiere, quotes Dr. J. C. Tache's archæological researches on Huron village sites, etc., in foot notes to vol. iii. (H.)

Lawson, A. C.

Ancient rock inscriptions on the Lake of the Woods. *American Naturalist*, vol. xix., 1885, pp. 654-658. Illus.

The above paper has been reprinted in pamphlet form. (C.)

McDonnell, Wm.

Manita. A legend. (Pamphlet). (Toronto, 1888.)

Relates to Indian burial place at Bald Point, Sturgeon Lake, Victoria Co. (H.)

Macdougall, Alan, M. Inst. C E., F.R S.E.

The Indian as an Artist. Trans. Can. Inst. Fourth series. Vol. iii., p. 42.

Abstract of paper given. Mentions similarity of their art and that of moundbuilders. (H.)

MacLachlan, R. W.

Indian Stone Pipes. The Canadian Antiquarian and Numismatic Journal, Montreal, vol. iv., 1875-1876, pp. 15-22, with plate.

Describes pipes of Flathead Indians, 20; pipe found at Balsam Lake, Peterboro Co., 20 ; pipe from Hochelaga, 21. (C.)

Fragments from the Stone Age of Montreal. The Canadian Antiquarian and Numismatic Journal, vol. iv., 1875-1876, pp. 174-181, with plate.

Spear and arrow heads, 176-177 ; whetstone, 178 ; stone hammer, 178 ; axe, 179 ; stone celt, 179 ; knife, 180. (C.)

Maclean, Rev. John, M.A., Ph.D.

Canadian Savage Folk. Toronto, 1896.

Has many references to interesting features of Ontario archæology. (H.)

The Indians ; their manners and customs. Toronto, 1889, pp. x, 350.

Gives interesting accounts of wampum, pp. 16-20 ; Indian burial customs, 29-36 ; the peace-pipe, 54-7 ; Indian charms, 70-3 ; picture-writing, 90-4; iron-stone idol, 201-8. (C.)

Martin, Father Felix, S. J.

Life of the Rev. Isaac Jogues.

Appendix A contains full description of Huron village sites in Simcoe Co. at which Father Jogues is supposed to have labored. (H.)

Relation Abregée (Bressani).

The notes to Father Martin's Montreal edition (1852) of this Relation contained much archæological material concerning the Hurons. (See Bressani.) (H.)

Meyers, R. D.

Two Ontario Caves, pp. 73-74. Eighth Archæological Report. Toronto, 1896.

Examination of two caves in Hastings Co. to determine to what extent they were used by Indians. (H.)

Montgomery, Prof. Henry, Ph. D.

Indian remains in Simcoe and Muskoka. Toronto *Globe*, Aug. 3, 1878.

Mentions Huron ossuaries, burial pits, village sites, pottery, etc., in Medonte township, Simcoe Co., and supposed picture-writing on rock in Muskoka. (H.)

Naturaliste Canadien, Le.

Age de la pierre taillie ches nos Aborigenes. Tome xvi., 1886-1887, pp. 65-72.

Discusses the stone age in Canada. (C.)

Nature.

VI. 264 (1872.)

Wilson on the Huron Indians.

Orillia Packet.

June 21, 1889.

Describes fishing stakes at the Narrows, Lake Simcoe. (H.)

Parkman, Francis, LL.D.

The Pioneers of France in the New World.

Notices Dr. Tache's examination of Huron sites. (H.)

La Salle and the Discovery of the Great West.

Notices of Aboriginal customs. (H.)

Jesuits in North America in the Seventeenth Century. (1867.)

At p. 79 occurs a footnote on Dr. Tache's examination of bonepits, etc., of the Hurons. (H.)

Peterborough Examiner.

Sept. 5, 1896.

Contains description of the Otonabee and Asphodel mounds. (H.)

Reynolds, Thomas, M.D.

Discovery of copper and other Indian relics near Brockville. *Canadian Journal*, new Series, 1856, pp. 328-334, with 4 figures in text.

Describes discoveries of chisels, knives, together with a portion of a pipe, a clay mask, etc., at Les Galops Rapids, while digging the St. Lawrence Canal, in 1847. (C.)

Sagard [Theodat], F. Gabriel

Le Grand Voyage au Pays des Hurons situé en l'Amérique vers la mer douce, es dernières confins de la Nouvelle France dite Canada, avec un dictionnaire de la langue Huronne, etc. A Paris, 1632. Nouvelle Edition. Publiée par M. Emile Chevalier. Paris, Librairie Tross, 1865. Deux Tomes, pp. (orig. paging, 380.)

Describes Canots (canoes), p. 89 (129); vessels of bark, 91 (132); cradles, 118 (170); chappelets, 135-6 (194-5); burials, 199 (285), 200 (287); birch-bark drawing, 245 (348), 246 (349); De la grande feste des Mort, 203-6 (291-5.) (C.)

Scadding, Rev. Henry, D.D.

Toronto of Old. (Toronto, 1873.)

At pp. 399-401 describes Indian burying ground at the Sandhill, Yonge Street, near Bloor Street; p. 400, Upper Canada Proclamation for the protection of Indian burying grounds, etc. (H.)

Schoolcraft, H. R.

Onéota; or, characteristics of the Red race. (1845.)

Notices (p. 326) earthworks near Dundas, five to eight miles in length. (See also Squier, p. 142.) (C.)

The Indian in his Wigwam; or, characteristics of the Red Race of America. (New York, 1847.)

Pp. 324-7 contain a letter, dated from Dundas, Oct 26, 1843, giving an account of a visit to an ossuary in Beverly township. At page 130 is a tradition of "Aingodon and Naywadaha," apparently referring to the neighborhood of Lake Simcoe. (C.)

Science (New York)

Vol. iv. (1884) pp. 316-320.

Brief abstracts of papers read at Montreal meeting of the Brit. Assoc. for Adv. of Science.

Huron-Iroquois as typical race of Amer. Aborigines. Wilson, 318.

Anthropological Discoveries in Canada. Hirschfelder, 318.

Origin of Wampum. Hale, 320. (C.)

Sellar, Robert.

History of the County of Huntingdon and of the Seigniories of Chateauguay and Beauharnois, from their first settlement to the year 1838. Huntingdon, P. Q., 1888, pp. viii., 584.

Notices (pp. 4-5) mound on Nun's Island, and (p. 5) relics found in Chateauguay. (C.)

Shea, Dr. John Gilmary.

Summary of the character and history of the Tobacco Nation. *Historical Magazine*, v. 262.

Title is: "An Historical Sketch of the Tionontates or Dinondadies, now called Wyandots." It has references to the remains of the Tobacco Nation found near Georgian Bay, in Simcoe Co. (H.)

Slafter, Rev. E. F., M.A.

Champlain's Voyages. Translated into English by Dr. C. Pomeroy Otis. With memoir by Rev. E. F. Slafter. Issued by the Prince Society; Boston, 1878-82. 3 vols.

In vol. i., the memoir has footnotes locating sites of Huron villages visited by Champlain, as laid down by investigations of Dr. J. C. Taché. (H.)

Smith, W. H.

Canada: Past, Present and Future. Toronto, 1851. 2 vols.

Vol. i,, p. 35, mentions origin of "The Point of Skulls," about twenty miles beyond Sault Ste. Marie. (H.)

Squier, E. G., M. A.

Antiquities of the State of New York, being the results of extensive original surveys and explorations, with a supplement on the Antiquities of the West. Buffalo, 1851.

Notices (pp. 15-16), remains found on Canadian side opposite Morrisville by Dr. Reynolds (q. v.); p. 16, figure of terra cotta mask found there. Pages 100-107, treat of ossuaries, etc., in Simcoe Co. after Bawtree (q. v.) P. 100, human bones, etc., discovered near Barrie in 1846, ossuary near St. Tincents (Vincents); 100-103, ossuary near Penetanguishene in Township of Giny (read Tiny), examined in 1847, from which skulls, 26 kettles of copper and brass, 3 large conch-shells, piece of beaver-skin, large iron axe, human hair, copper bracelet, beads, etc., were taken, description of pit, p. 101, kettles, 100-102 (figure on p. 102); axe, with figure, 102; pipe, 102-103; beads, 103. Pages 103-104, describe another pit (two miles from above), and contents; 104-105, a pit discovered in Oro township in November, 1847, in which several hundred skeletons, 26 kettles, one conch-shell one iron axe, a number of flat perforated shell-beads and pipe were found. Pages 105-6 describe a pit in the Township of Giny (Tiny) from which a large number of skeletons, 16 conch-shells, a stone and a clay pipe, copper bracelets, and ear-ornaments, red pipestone beads, and copper arrowheads were taken. Pages 106-108 deal with a fifth pit in the centre of the Township of Tiny, with figure and plan opposite p. 107. P. 108 notices a burial place on Isle Ronde, near the extremity of Lake Huron, and one near Hamilton. Pages 108-110 contain quotation from Charlevoix (ii., 194) on the Fête des Morts among the Hurons and Iroquois. On p. 142 and p. 267 are brief references to earthworks in Canada. (C.)

Stone, Wm. L.

Orderly book of Sir John Johnson during the Oriskany Campaign, 1776-7. Albany, 1882.

A note on page 68 describes a large Indian burial ground on the shore of Button Bay, Wolfe Island, discovered is 1878, by reason of the washing away of the shore. Find of large spears, arrowheads and skulls (encased in mica). Also a mound covering skeletons. (C.)

The Week (Toronto.)

April 16, 1885.

Account of Rev. Prof. Bryce's examination of the Rainy River mounds. (H.)

Thomas, Miss Nora.

Burial Ceremonies of the Hurons. Translated from the Relations des Jesuites, 1636, pp. 128-139. Supplemental Note to "Burial Mounds of the Northern Section of the United States," by Prof. Cyrus Thomas in Fifth Annual Report of the Bureau of Ethnology, 1883-4. (Washington, 1887), pp. 3-139.

Describes the burial customs of the Hurons as recorded by Brebeuf in the Jesuit Relations. (C.)

Thompson, Samuel.

Reminiscences of a Canadian Pioneer. Toronto, 1884.

Paleolithic implements, found near Toronto, are mentioned at pp. 286, 365. (H.)

Toronto Empire (Newspaper.)

Feb. 24, 1894.

Describes six large ossuaries, etc., in Simcoe County, from description by Dr. E. W. Bawtree. (See Squier, E. G., and Bawtree, E. W., M.D.) (H.)

Toronto Globe (Newspaper.)

Aug. 3, 1878.

Indian remains in Simcoe and Muskoka. By Prof. H. Montgomery.

Mention Huron ossuaries, burial pits, village sites, pottery, etc., in Medonte township, Simcoe Co., and supposed inscribed rock in Muskoka. (H.)

Vol. xlvi., No. 190. Aug. 9, 1890.

Contains on pages 1 and 2, a lengthy article on Indian archæology, illustrated by numerous woodcuts of specimens in the possession of the Ont. Archæo. Museum, including stone and clay pipes, tubes, awls, totems, copper implements, etc., by David Boyle. (C.)

Jan. 15, 1887. Indian graves on the Humber.

Notice of paper read before the York Pioneers by Chas. Durand, Dec. 26, 1886, (C.)

Sept. 8, 1896,

P. 7 contains account of discovery of the Otonabee Serpent Mound. (H.)

Toronto Mail (Newspaper.)

Sept. 14, 1889.

Contains account of human bones found in Mindemoya Cave, Manitoulin Island. (H.)

Sept. 20, 1889.

Notice (p. 8, col. 2) of ossuary and contents, near Thornhill, York County. (C.)

Toronto Telegram (Newspaper.)

Mound Builders. Mar. 16, 1886 (or a few days earlier.)

Reference to the mounds of Rainy River. (H.)

Traill, Mrs. Catherine Parr.

The Canadian Crusoes; A tale of the Rice Lake Plains. 376 pp. Boston. 1881.

Contains: description of preparation of rice (pp. 203-204), mortar (204), stone implements (368), artistic work (pp. 375-6). (C.)

Van Courtland, Edward.

Notice of an Indian burying ground. *Canadian Journal*, vol. i., 1852-1853, pp. 160-161.

Describes an Indian burying ground and contents discovered at Bytown (Ottawa) in 1843. (C.)

Wallace, Joseph, Sen.

Early History of Orillia. Orillia *Packet.* Nov. 15 and 22, 1895.

Mentions various prehistoric sites on the ground now occupied by the town of Orillia. (H.)

A Fishing Station of the Ancient Hurons Identified. The Canadian Indian (Sault Ste. Marie). Pp. 134-138.

Describes hurdles for fishing, at the Narrows, Lake Simcoe. (H.)

Wallbridge, Thomas Campbell.

On some ancient mounds upon the shores of the Bay of Quinte. *Canadian Journal,* new Series, vol. v., 1860, pp. 409-417, with two plates between pages 482-483.

Describes mounds and contents in the neighborhood of Rednersville and Massassaga Point. (C)

Weld, Isaac, Jr.

Travels through the States of North America and the Provinces of Upper and Lower Canada during the years 1795-7. Fourth Edition. Illustrated and embellished with 16 plates. London, 1807, 2 vols.

Describes Indian dress and ornaments, 231-8 , brooches, 236 ; bracelets, rings, ear-rings, etc., 236 ; nose pendants, 237 ; silver and shell breastplates, 237 ; utensils, 241-3; weapons, 243-4; wampum, 249-52 ; quill-work, 259-60. (C.)

Wilson, Sir Daniel, LL D., F.R.S E.

Hints for the formation of a Canadian collection of ancient crania. *Canadian Journal,* vol. iii., 1854-1855, pp. 345-346. Signed "D. W." (C.)

Observations suggested by specimens of a class of conchological relics of the Red Indian tribes of Canada West. *Canadian Journal,* vol. iii,, 1854-1855, pp. 155-159.

Describes specimens of tropical shells found with Indian remains ; also describes an ossuary in Beverly township. (C.)

Displacement and extinction among the Primeval Races of Man. *Canadian Journal,* second Series, vol. i., (1856) p. 4. (H.)

The Ancient Miners of Lake Superior. *Canadian Journal,* second Series, vol. i., (1856) pp. 225-37. (H.)

Discovery of Indian remains in the County of Norfolk. *Canadian Journal,* new Series, vol. i. (1856) pp. 511-519.

Describes discovery of a skeleton, fragments of pottery, etc., in the Township of Windham. (C.)

Indian remains. *Canadian Journal,* new Series, vol. i. (1856) pp. 554-556.

Describes an Indian barrow near Orillia, Simcoe County, from which 70 skulls, some beads, copper kettles, etc., were taken. Signed "D. W." (C.)

Physical ethnology. Smithsonian Report (1862), Washington, 1863, pp. 240-302.

Treats of crania of Canadian Indians, 256 table of measurement of Huron crania, 259 ; of Algonkin crania, 260. (C.)

The Huron race and its head form. Journal of the Anthrop. Instit. of Great Brit. and Ireld., vol. i., (1872) pp. 262-263.

A paper read before the Canadian Institute, April 8, 1872. (C.)

The Huron race and its head form. *Canadian Journal,* second Series, vol. xiii. (1871-3) pp. 113-134.

Has comparison of Barrie skull with that of a mound builder. Plates opposite pp, 113, 126, 128 ; table of measurements, p. 131. (C)

Prehistoric Man. Researches into the origin of civilization in the Old and New Worlds. London (1862), 2 vols. ; second edition (1876), 2 vols.

Passim, and at i., 105, archæological discoveries at Toronto. (C.)

Ethnical Forms and Undescribed Artificial Distortion of the Human Cranium. *Canadian Journal,* second Series, vol. vii. (1862), pp. 399-446.

Plates, 399 (Barrie skull), 406, 438; Huron skull from Barrie, 400, 401. (C.)

Some Ethnological Aspects of Conchology. *Canadian Journal,* second Series, vol. iii. (1858), pp. 377-409.

Shell ornaments of Chinook Indians, p. 380; find (in 1848) of shells and pottery, p. 399; Indian cemetery near Orillia, pp. 399-400. (C.)

Narcotic Usages and Superstitions of the Old and New World. *Canadian Journal,* second series, vol. ii. (1857), pp. 233-264, continued, pp. 324-344.

Plate of Babeen and Chippeway pipes, p. 254; Mohawk pipe, p. 326; Chinook, p. 331: Cree, p. 333; pipe of Chippeways of Manitoulin Island, p. 333; plate of Babeen pipe, p. 334. (C.)

Supposed prevalence of one Cranial Type throughout the American Aborigines. *Canadian Journal,* second Series, vol. ii. (1857), pp. 406-435.

Measurements of Chippeway skulls (Lake Couchiching), p. 422; general type of Canadian Indian skulls, p. 424-425; Western Canada Hurons, p. 428, Six Nations, p. 429. (C.)

Supposed prevalence of one Cranial Type throughout the American Aborigines. Edinburgh New Philos. Journ., vii. (1858), 1-32. (C.)

Some Ethnological phases of Conchology. *Ibid.* ix. (1859), 65-82; 191-210. (C.)

On some modifying elements affecting the ethnic signification of peculiar forms of the human skull. *Ibid.* xiv. (1861), 269-281. (C.)

On some modifying elements affecting the ethnic signification of peculiar forms of the human skull. *Canadian Journal,* second Series, vol. xv. (1861). (C.)

Trade and Commerce in the Stone Age. Trans. Roy. Soc., Canada, sect. ii. (1880), pp. 59-87.

Contains descriptions of Canadian flints (pp. 71-72). obsidian (79), pipes, Chippewa (82): stone relics (85), spear-points (85). (C.)

The Huron-Iroquois of Canada. A Typical Race of the American Aborigines. Trans. Roy. Soc., Canada, vol. ii. (1884), sect. ii., pp. 55-100. (C.)

The Lost Atlantis and other Ethnographic studies (1892).

A collection of monographs, including various references to Ontario archæology. (H.)

Winsor, Justin

The progress of opinion respecting the origin and antiquity of man in America. Narrative and Critical History of America. Edited by Justin Winsor. Vol. i. (1889), pp. 369-412.

Contains valuable bibliographical items. Also, p. 377 and 389, figure of Hochelaga skull from Dawson's "Fossil Men." (C.)

Withrow, Rev. W. H

Last of the Huron Indians. *Canadian Monthly,* ii., 409. (H.)

The Mound Builders and Cliff Dwellers, *Methodist Magazine and Review,* Nov. 1896.

Refers to the "extremely valuable discovery or identification that has just been made" of the Serpent Mound "in the Township of Otonabee by Mr. D. Boyle." (H.)

HORATIO HALE,

BORN AT NEWPORT, NEW HAMPSHIRE, U.S.A.,
May 3rd, 1817.
Died at Clinton, Ontario.
December 28th, 1896.

Mr. Hale graduated at Harvard in 1837. He was an accomplished philologist, and applied his extensive knowledge of American languages to the furtherance of ethnic and anthropic studies.

When an undergraduate he was appointed Philologist to the United States Exploring Expedition under Commodore Wilkes, in which capacity, the result of his investigations elicited the approval of the best linguistic authorities on both sides of the Atlantic.

Many of the numerous valuable papers he wrote are embodied in the transactions of learned societies.

His best known work is The Iroquois Book of Rites, based on the translation of two manuscripts in the Mohawk and Onondaga dialects, and treating of the origin, laws and ceremonial customs, of the Five Nations.

He discovered in Ontario the last survivors of the Tutelos, formerly of Virginia and North Carolina, and, on the basis of their language, identified them as being connected with the Dakotas.

As an influential member of the British and American Associations for the Advancement of Science, he aided in forming the anthropological sections of both these societies.

He was a vice-president of the American Association and president of its Anthropological section, besides which he was a member of the Anthropological Institute of Great Britain, the Anthropological Society of Washington, the Pennsylvania Historical Society, the New England Historico-Genealogical Society, the Buffalo Historical Society, the Canadian Institute, and many other societies.

His correspondence with the world's most distinguished ethnologists and philologists was very extensive, and was maintained almost until his last day.

He frequently expressed his deep interest in our archæological work, and referred to it in terms, which, coming from such a source, afforded much encouragement.

Mr. Hale's place in scientific ranks will be hard to fill, and perhaps none will more readily acquiesce in this statement than Dr. D. G. Brinton of Philadelphia, who, having so long shared his mantle, must now wear it alone.

ANNUAL

ARCHÆOLOGICAL REPORT

1897-8.

BEING PART OF

APPENDIX

TO THE REPORT OF THE

MINISTER OF EDUCATION

ONTARIO.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY

TORONTO:
WARWICK BRO'S & RUTTER, PRINTERS &c., 68 AND 70 FRONT ST. WEST.
1898.

Oct 19-1908

CONTENTS.

PAGE.

Presentation 1
Additions to the Museum 3
Notes on some Specimens:
  Methods of Working 15
  Drill Rest 16
  Clay Pipes 17
  Stone Pipes 21
  Stone Discs 22
  Bone 23
  Shell Work 24
  Copper 25
  Textile Work 25
  Medicine Mask 30
  Brass Tomahawk 31
  The Jesuit Stone 32
  Stone Tool Work 33
  Recent Primitive Pottery 34
Christian Island:
  Fort Ste. Marie 35
  Pagan Burying Ground 39
  Ahoendoé Ossuary 40
Brantford Township 42
  Whiteman's Creek 43
Malahide Township:
  Circular Ridge near Mount Salem 43
  Earthwork in Malahide 44
Orillia Township:
  Lake St George Ridge 44
Old Maps:
  Sanson's Map of Canada 47
  Map of the Country of the Five Nations 49
North Victoria 50
  Balsam Lake and Vicinity, by George E. Laidlaw 51
Rev. R. Ashington Bullen's Donation 65
Bibliography of the Archæology of Ontario, by A. F. Hunter 67

ARCHÆOLOGICAL REPORT.

To the Honorable G. W. Ross, LL. D., M.P.P., Minister of Education:

Sir,—Owing to the time and attention demanded in connection with the removal and re-arrangement of all our archæological material this year, comparatively little was effected by way of field-work. In this respect, therefore, the report is but a meagre one.

As now installed in your Departmental Buildings, the specimens show to much better advantage, and are therefore more interesting and valuable educationally than they were before, and this is their only use.

The wall-cases provided are admirable for the display of numerous large ethnological, as well as large archæological specimens, and if the table-cases corresponded with these in commodiousness and appearance, nothing better could be desired. It has been well said, I think by Prof. Flower, recently President of the British Association, that "a finished museum is a dead museum," and in accordance with this dictum ours is so very much alive that for many years it is hoped it will be necessary to provide more room, especially in the shape of table-cases, for in those alone is it possible to examine small specimens.

Since the removal, more specimens have been presented to the collection by visitors than during any other similar period, and as the time has arrived when it is desirable to pay more attention to the ethnology of our own and other continents than we have done, it is gratifying to report that our prospects of growth along this line are very good, and students may expect to have before long, material by means of which to effect comparisons and arrive at conclusions.

Our collection of crania has increased very considerably during the last few years, and I am much pleased to report that Dr. James G. Caven has undertaken to make a thorough study of each specimen, supplying measurements, and such other information as is required to satisfy the demands of modern science. This work will occuppy Dr. Caven's attention as he may find time, during 1898, and it is hoped that the results will be ready for publication in next report.

It is anticipated that during 1898, there will be opportunities to reach many places to which the attention of the Curator has been directed.

I have the honor to be
Yours, respectfully,
DAVID BOYLE.

ADDITIONS TO THE MUSEUM

16,325. Stone pipe Calgary, North West Territory. John F. Holden, Toronto Junction.

16,328. Slate gorget, lot 20, con. 7, Vespra township, Simcoe county. Christopher Scott, per A. F. Hunter, M. A., Barrie.

16,329. Chert arrow-head, lot 20, con. 10, Vespra township. Augustine Quinn, per A. F. Hunter, M. A., Barrie.

16,330. Stone axe, lot 11, con. 1, Flos township. Allan Laidlaw. per A. F. Hunter, M. A., Barrie

16,331. Stone axe, lot 1, con. 10, Medonte township. Christopher Shire, per A. F. Hunter, M. A., Barrie.

16,332. Stone axe, lot 4, con. 8, Oro township, Simcoe county. James Davis, per A. F. Hunter, M.A. Barrie.

16,333. Stone axe, lot 8, con. 7, Oro township. Arch. McDuff, per A. F. Hunter, M. A., Barrie.

16,334. Stone axe, lot 3 con. 11, Innisfil township. Alfred Warnica, per A. F. Hunter, M.A., Barrie.

16,335. Clay pipe, lot 1, con. 5, Medonte township. Found in skeleton's jaws. F. Whitelock, per A. F. Hunter, M.A., Barrie.

16,336. Clay pipe, lot 4, con. 8, Oro township, Simcoe county, (complete specimen). Jas. Davis, per A. F. Hunter, M. A., Barrie.

16,337. Clay pipe, lot 4, con, 8, Oro township, Simcoe county. James Davis, per A. F. Hunter, M.A., Barrie.

16,338. Clay pipe, lot 20 con. 10, Vespra township, (*very* modern). P. Quinn, per A. F. Hunter, M.A., Barrie.

16,339. Clay pipe, lot 20, con. 10, Vespra township, (totem pipe? effigy lost). P. Quinn, per A. F. Hunter, M.A., Barrie.

16,341. Stone gouge, very fine, found in a gravel pit, south shore of Lake St. Louis, two miles west of Chateauguay river mouth, or six miles west of Caughnawaga. R. W. Leonard, C.E.

16,342-16,344. Beads made from small quadrupeds' jaw bones, York township, York county. S. Dunn.

16,345-16,349. Clay vessels from Arizona pueblos, (Hale collection) by exchange from the Field Columbian Museum, Chicago.

16,350-16,352. Clay vessels, Cuzco, Peru, (Montez collection) by exchange from the Field Columbian Museum, Chicago.

16,353. Stellar, stone club-head, Cuzco, Peru, (Montez collection) by exchange from the Field Columbian Museum, Chicago.

16,354. Llama cup, Cuzco, Peru, (Montez collection), by exchange from the Field Columbian Museum, Chicago.

16,355-16,359. Clay vessels, from Nicaragua, by exchange from the Field Columbian Museum, Chicago.

16,360-16,366. Clay vessels, from Arkansas, (Riggs collection), by exchange from the Field Columbian Museum, Chicago.

16,367-16,369. Clay vessels from Chimbote, Peru, (Dorsay collection), by exchange from Field Columbian Museum, Chicago.

16,370-16,374. Clay vessels from Costa Rica. (Scriven collection), by exchange from the Field Columbian Museum, Chicago.

16,375. Buddha, rudely carved in pyritiferous steatite, looted from a temple in Hyderabad, India.

16,376. Large clay cinerary urn, Ossabaw Isl. Bryan county, Georgia. Clarence B. Moore, Philadelphia.

16,377. Shell digging tool, (*Fulgur carica*) Ossabaw Isl., Bryan county, Georgia. Clarence B. Moore, Philadelphia.

16,378. Shell drinking cup, found near human remains, Darien, McIntosh county, Georgia. Clarence B. Moore, Philadelphia.

16379. Shell spade, surface find, Ossabaw Isl., Bryan county, Georgia. Clarence B. Moore, Philadelphia.

16,380. Shell spade, surface find, Ossabaw Isl., Bryan county, Georgia. Clarence B. Moore. Philadelphia.

16,381. Shell drinking cup, showing intentional perforation so often practiced by the Florida Indians, and less frequently by the South Georgia Indians, to "kill" the vessel, and thus release its spirit for the use of the spirit of the body with which it was buried. Clarence B. Moore, Philadelphia.

16,382-16,404. Large shell beads, found with calcined human remains in portion of a cinerary urn, Mound C., Bluff Field, Ossabaw Isl., Georgia. Clarence B. Moore, Philadelphia.

16,405-16,430. Medium size shell beads, Mound, Ossebaw Isl., Bryan county, Georgia. Clarence B. Moore, Philadelphia.

16,431-15,435. Large shell beads, Mound C., Bluff Field, Ossabaw Isl., Georgia. Clarence B. Moore, Philadelphia.

16,436. Fresh water mussel-shell, perforated for suspension. Found with calcined human bones in Mound C., Middle Settlement, Ossabaw Isl., Bryan county, Georgia. Clarence B. Moore, Philadelphia.

16,437. Ornamented bone found with human skeleton, Mound A., Lawton's Field, Darien county, Georgia, Clarence B. Moore, Philadelphia.

16,438. Shell tool, surface find, Bryan county, Georgia, Clarence B. Moore, Philadelphia.

16,439. Small piece of artificially perforated pumice stone (two holes). From shell heap near Turtle Mound, New Smyrna, Volusia county, Florida. Clarence B. Moore, Philadelphia.

16,440-16,441. Potsherds used as hones, Mound C., Bluff Field, Ossabaw Isl., Georgia. Clarence B. Moore, Philadelphia.

16,442-16,443. Hammer-stones, Mound C., Middle Settlement, Ossabaw Isl, Georgia. Clarence B. Moore, Philadelphia.

16,444. Bone awl, Mound C., Middle Settlement, Ossabaw Island, Georgia. Clarence B. Moore, Philadelphia.

16,455. Shell (columella) pendant, Mound C., Middle Settlement, Ossabaw Isl., Georgia. Clarence B. Moore, Philadelphia.

16,446-16,449. Roughly worked stones, found together in a cinerary urn, Mound C., Bluff Field, Ossabaw Isl., Georgia, Clarence B. Moore, Philadelphia.

16,450. Large, inverted-bell-shaped clay urn. Whole exterior ornamentally marked. Contained adult skeleton bones much decayed, St. Catherines Island, Liberty County, Georgia. Clarence B. Moore, Philadelphia.

16,451. "Medicine" mask used by the late Chief Ska-na-wa-ti, an Onondaga Fire-keeper, and one of the leading Iroquois Medicine men on the Grand River Reserve, Ontario. Miss E. Pauline Johnson, Brantford.

16,452 Ska-na-wa-ti's turtle-shell rattle used in certain portions of the medicine- making ceremony. Miss E. Pauline Johnson, Brantford.

16,453. Iroquois wampum belt, traditionally regarded as not less than three hundred years old. This was buried with others during the Colonial war. Miss E. Pauline Johnson, Brantford.

16,454. Western wampum bel of dentalium shells. Miss E. Pauline Johnson, Brantford.

16,455. Chief's large silver medal, *temp.* George III. Obtained from Mississauga Indians who frequented Goderich about fifty years ago. Mrs. Cameron.

16,456. Bird amulet (cast), near Plattsville. Henry Smith, New Hamburg.

16,457. "Banner-stone" (cast). James Rennie. Henry Smith, New Hamburg.

16,458. Small tube (cast). Wm. Kerr, 3rd concession of Wilmot. Henry Smith, New Hamburg.

16,459. Small stone pipe (cast), Alberta, North-west Territory. Henry Smith, New Hamburg.

16,460. Small clay pipe (cast), Indian camping-ground, Smith's Creek. Henry Smith, New Hamburg.

16,461. Large clay pipe (cast) north of Wilmot township. Henry Smith, New Hamburg.

16,462. Large stemmed clay pipe (cast), south side of Baden, Wilmot township. Henry Smith, New Hamburg.

16,463. Twenty-two "flints" made by Mr. Henry Smith, as an attempt to imitate Indian workmanship of this kind. Henry Smith, New Hamburg.

16,464-16,604. One hundred and forty bronze and white metal medals. struck by P. W. Ellis and Co. Toronto, in commemoration of important historical events, and as exhibition, college and school prizes. This collection will be kept up as new medals appear, and the collection will form an interesting part of the proposed historical museum. P. W. Ellis and Co., Wellington St. E., Toronto.

16,605. Ojibwa (Mississauga) cradle of very superior quality, used in the family of Mrs. Madwayash, Saugeen, and presented by her daughter, Mrs. Marsden, Alderville, per Pashigeezhik, a Mississauga student at Victoria College, Toronto.

16,606-16,607. Palœolithic celts, Thennes, Thezy, France. Sir John Evans, Hemel, Hempstead, England.

16,608. Palœolithic celt, Brickfield, Hitchin, England. Sir John Evans, Hemel Hempstead, England.

16,609. Stone pipe-bowl, Orchard Beach Farm, East Gwillimbury township, near Keswick P. O. York county. Dr. W. L. T. Addison. Byng Inlet.

16,610. Imperfect, trumpet-mouthed clay pipe-bowl, lot 28, con. 7, Scott township, Ontario county. Dr. W. L. T. Addison.

16,611. Half of small clay pipe-bowl similar to 16,610, and from the same place. Dr. W. L. T. Addison.

16,612. Pigeon's head, neatly moulded, from edge of a clay pipe-bowl, lot— con., 7, Whitchurch. Dr. W. L. T. Addison.

16.613. Small and somewhat roughly made clay pipe-bowl, lot 28, con. 7, Scott township. Dr. W. L. T. Addison.

16,614. Almost cylindrical clay pipe-bowl, marked on upper end with seven fine parallel lines, making the same number of narrow collars round the bowl. Four shallow holes at irregular intervals have been made immediately below the collars. Lot 28, con., 7, Scott, Ontario county. Dr. W. L. T. Addison.

16,615. Part of clay pipe-stem showing marks of cord that the clay was moulded around to form the stem-hole. Near Aurora. con. 7, Whitchurch, York County, Dr. W. L. T. Addison.

16,616. Small piece of moulded and burnt clay—has been broken from from a larger piece. No locality. Dr. W. L. T. Addison.

16,617. Ear of clay vessel, showing how it was luted. No. locality. Dr. W. L. T. Addison.

16,618. Rubbing-stone—apparently fine grained, Hudson River shale—worn hollow and very smooth. No locality. Dr. W. L. T Addison.

16,619. Small two-holed gorget of Huronian slate from northern part of Michigan. Dr. W. L. T. Addison.

16,620. Bone bead-like form, 2½ inches long, having an oblong hole 7-16 inch long, and 3-16 inch wide cut in the middle. By closing both ends with the thumbs and blowing flute-wise into the hole, a weak whistle may be produced. Dr. W. L. T. Addison.

16,621. Similar to 16,620, but one-fourth of an inch longer, and not so wide. The hole in this specimen is about the same length as in the preceding one, but is nearly twice as wide. It is also ornamented. Dr. W. L. T. Addison.

16,622. Small bead-like bone 1¼ inches long. Extremities very rough; has small hole badly made in the middle of one side, somewhat like 16,220 and 16,621. Found in "Old Fort" ground, Whitchurch, York county. Dr. W. L. T. Addison.

16,623. Small deer-horn (one prong) ground at tip to a chisel edge. Dr. W. L. T. Addison.

16,624-16,637. Fourteen bone-beads from half an inch to three and a half inches long, found in various northern parts of York county. Dr. W. L. T. Addison.

16,638. Bone-bead, con. 7, Whitchurch. Dr. W. L. T. Addison.

16,639. Small stone, having a shallow pit or hollow on one side as for a drill-rest to place against the forehead or chin. No locality. Dr. W. L. T. Addison.

16,640. Triangular piece of chert an inch in height, seven-eighths of an inch wide, and nearly three-fourths of an inch across the base; has black vein in the middle. Some rubbing seems to have been been done, but the form may be wholly natural. No locality. Dr. W. L. T. Addison.

16,641. Bone awl or needle, lot 28, con. 7, Scott township, Ontario county. Dr. W. L. T. Addison.

16,642. Bone needle or awl, con 7 near Aurora, Whitchurch. Dr. W. L. T. Addison.

16,643. Bone needle, lot 28, con. 7, Scott township, Ontario county. Dr. W. L. T. Addison.

16,644. Small pendant—water-worn slate, 1⅛ inches long, artificially bored at one end, no locality—probably North York. Dr. W. L. T. Addison.

16,645. Pendant made from a corallite, discoidal, 1⅛ inches in diameter, and about half an inch thick, probably North York. Dr. W. L. T Addison.

16,646-671. Twenty-six fragments of pottery bearing characteristic markings, chiefly from lot 28, con. 7, Scott township, Ontario county. Dr. W. L. T. Addison.

16,672-16,693. Eleven flints, from various places. Dr. W. L. T. Addison.

16,694-16,699. Five small stone axe blades, mostly from lot 28, con. 7, Scott township. Dr. W. L. T. Addison.

16,700. Small vetebral (turtle) bone, carved to represent a dog or fox, by Allan Comego. Allan Comego, Alderville, per Pashigeezhik, (Richard Black).

16,701. Slate gouge, Shearer's Point, Alnwick township, Northumberland county. Pashigeezhik (Richard Black), Alderville.

16,702. Discoidal stone an inch and three-fourths in diameter and five-eighths of an inch thick, slightly pitted near the middle, on each side. Samuel Frazer, lot 10, con. 2, Tay township, Simcoe county, per Campbell Shaw, Midland.

16,703. Long ogee bar amulet, Beausoleil Island.

16,704. Clay pipe, strongly marked human face, stem gone. Levi Taylor, Victoria Harbor. Dr. R. W. Large.

16,705. Square mouthed clay pipe, near Waverley, Simcoe County. Mr. Brown. Dr. R. W. Large.

16,706. Square mouthed clay pipe, near Waverley. Mr. Brown. Dr. R. W. Large.

16,707. Clay pipe-head — pinched human face much injured. T. Crawford, Midland. Dr. R. W. Large.

16,708. Clay pipe-head, near Vasey, Simcoe county. Dr. R. W. Large.

16,709. Clay pipe head, near Waverley, Simcoe county. Dr. R. W. Large.

16,710. Clay pipe-head, broken, near Penetanguishene, Simcoe county. Dr. R. W. Large.

16,711. Clay pipe head, parallel horizontal lines all round, near Waverley, Simcoe county. Dr. R. W. Large

16,712. Clay pipe, good, stem broken. near Vasey, Simcoe county. Dr. R. W. Large.

16,713. Clay pipe, pinched human face, found by T. Crawford near Midland. Dr. R. W. Large.

16,714. Clay pipe, pinched human face, near Penetanguishene. Dr. R. W. Large.

16,715. Coarsely made clay pipe, with short stem: near Waverley, Simcoe county. Dr. R. W. Large.

16,716. Clay pipe bowl, trumpet-mouthed: near Waverley, Simcoe county. Dr. R. W. Large.

16,717. Clay pipe bowl, bulged in the middle: near Waverley, Simcoe county. Dr. R. W. Large.

16,718. Clay pipe bowl, trumpet-mouthed, well made: near Emery, York county. Dr. R. W. Large.

16,719. Clay pipe bowl, pinched face broken off. Brown's farm, near Waverley, Simcoe county. Dr. R. W. Large.

16,720. Part of clay pipe, with two rings round the middle. Brown's farm, near Waverley. Dr. R. W. Large.

16,721. Clay pipe bowl, mutilated, probably an owl's head: near Penetanguishene, Simcoe county. Dr. R. W. Large.

16,722. Part of rim of a large trumpet-mouthed clay pipe: near Penetanguishene. Dr. R. W. Large.

16,723. Small and rudely made clay pipe: near Penetanguishene. Dr. R. W. Large.

1624. Part of a clay pipe bowl surmounted by a bird's head: near Vasey, Simcoe county. Dr. R. W. Large.

16,725. Soapstone pipe, plain, short stem. Found by Mrs. Graham, near Vasey. Dr. R. W. Large.

16,726. Elliptical vasiform pipe of soapstone; no locality. Dr. R. W. Large.

16,727. Vasiform soapstone pipe: near Vasey, Simcoe county. Dr. R W. Large.

16,728. Part of a bowl of a soapstone pipe of unusual form, widening near the stem: near Vasey, Simcoe county. Dr. R. W. Large.

16,729. Small soapstone pipe, perfect, near Midland, Simcoe county. Dr. R. W. Large.

16,730. Part of a slate implement, 3⅜ inches long, and about 7-16 of an inch thick in the middle—cross section rhomboidal: near Vasey, Simcoe county. Dr. R. W. Large.

16,731. Small brown stone t ol, 2¼ inches long, and ⅝ wide, pointed at one end: near Emery, York county. Dr. R. W. Large.

16,732. Part of a bone tool, probably a harpoon end, with hole for attachment by a string to the handle: near Vasey. Dr. R. W. Large.

16,733. Bone awl, ornamental on one side with diagonal and other lines : near Emery, York county. Dr. R. W. Large.

16,734. Bone awl, plain, four inches long : near Emery. Dr. R. W. Large.

16,735. Bone awl, four and three-fourth inches long: near Emery. Dr. R. W. Large.

16,736-16,741. Bone awls of various sizes: near Emery, York county. Dr. R. W. Large.

16,742. Bone awl, three inches long: near Vasey, Simcoe county. Dr. R. W. Large.

16,743. Bone harpoon, four inches long, two barbs, hole in one end. Mr. Bell, Waverley. Dr. R. W. Large.

16,744. Wooden bowl, ornamental carving, bought from a half breed named Cowan : near Wyebridge. Dr. R. W. Large.

16,745-16,776. Thirty-two flints from Simcoe and northern parts of York county. Dr. R. W. Large.

16,777. Large quartz spear-head, roughly chipped, no locality. Dr. R. W. Large.

16,778-16,779. Two quartz arrow-heads, no locality given. Dr. R. W. Large.

16,780. Deer horn prong with chisel-shaped point: near Emery, York county. Dr. R. W. Large.

16,781. Deer-horn prong, slightly worked to form a punch point: near Emery. Dr. R. W. Large.

16,782. Small bone pin, ends rounded : near Emery. Dr. R. W. Large.

16,783. Bone bead, 2¼ inches long: near Vasey. Dr. R. W. Large.

16,784. Triangular piece of large sub-tropical shell, 1¾ inches long : near Penetanguishene, Simcoe county. Dr. R. W. Large.

16,785-16786. Two bear's teeth, much worn, from ash beds: near Emery. Dr. R. W. Large.

16,787. Large and thick bone awl, broken at the point : near Emery. Dr. R. W. Large.

16,788-16,794. Seven carpel bones, (probably deer) variously worked, some ground flat on one side and some bored in different places : near Emery and Vasey. Dr. R. W. Large.

16,795. Aluminum medal, bearing Dominion coat of arms. C. C. James, Deputy Minister of Agriculture.

15,796. Stone adze, 8 inches long, found by Paul Bigsail, Snake Island, Lake Simcoe. Dr. R. W. Large.

16,797. Double ended stone adze, one end degraded to hammer use, near Vasey. Dr. R. W. Large.

16,798. Iron tomahawk, (French): near Vasey, Simcoe county. Dr. R. W. Large.

16,799. Iron tomahawk, (French): near Vasey, Simcoe county. Dr. R. W. Large.

16,800. Pair of small scissors, much corroded, probably of French make, and connected with the old Huron Mission: near Penetanguishene, Simcoe county. Dr. R. W. Large,

16,801. Hammer-stone, found near Vasey. Dr. R. W. Large.

16,802. Rubbing-stone, not much used—originally a water-worn stone, near Emery. Dr. R. W. Large.

16,803. Coarsely finished stone axe, 7½ inches long: near Vasey. Dr. R. W. Large.

16,804. Water-worn pebble, originally oval, but ground down at two ends to make it round or nearly so: near Midland, Simcoe county. Dr. R. W. Large.

16,805. Two water-worn pebbles, used as hammers and rubbing stones: near Emery. Dr. R. W. Large.

16,806. Unfinished "butterfly" banner-stone, Dr. R. W. Large.

16,807-16,810. Four iron tomahawks (French), found in North Simcoe. Dr. R. W. Large.

16,811-16,830. Fragments of pottery, ornamented with dots and lines, from various places in York and Simcoe counties. Dr. R. W. Large.

16,831. Ovate hammer-stone, slightly hollowed on one side: near Vasey. Dr. R. W. Large.

16,832. Celt, six inches long, well made: near Vasey. Dr. R W. Large.

16,833. Part of unio shell, perforated near the hinge: no locality. Dr. R. W. Large.

16,834. Celt or adze, five inches long: no locality. Dr. R. W. Large.

16,835. Quadrangular rubbing-stone: no locality. Dr. R. W. Large.

16,836. Large, well polished, bead-like bone, five inches long, and nearly an inch in diameter at each end: near Emery, York county. Dr. R. W. Large.

16,837. Clay pipe, plain, with sharp angles at junction of bowl and stem. King Township, York county. Dr. R. W. Large.

16,838. Clay pipe bowl. Stony Lake, near Peterboro'. Dr. R. W. Large.

16,839. Clay pipe bowl: near Vasey, Simcoe county. Dr. R. W. Large.

16,840. Slate tube, three and three-fourth inches long: near King Village. Dr. R. W. Large.

16,841. Small celt or chisel, having a small transverse groove one inch from upper end. as if for fastening to a handle. Dr. R. W. Large.

16,842. Small bone needle of peculiar make, and slightly ornamented: near Penetanguishene. Dr. R. W. Large.

16,843. Weaving needle with hole, one end broken: near Emery. Dr. R. W. Large.

16,844. Small bone awl, apparently being prepared for cutting into two: near Emery. Dr. R. W. Large.

16,845. Seven bone awls or needles: near Emery. Dr. R. W. Large.

16,848. Neolithic celt, Swaffham Fen, Cambridge, England. Sir John Evans, Hemel Hempstead.

16,847. Roughly made celt. Henry Merriam, Harwood.

16,848. Small and very elegant iron axe used in the Bihe spirit-dances, Angola (Portuguese) S. W. Africa. Mrs John Currie, Toronto.

16.849. Small musical instrument consisting of thirteen steel (?) tongues mounted on a piece of carved board, seven inches long and four inches wide. Cisamba, Angola. Africa. Mrs. John Currie.

16,850—16,853. Four iron-tipped arrows (two of them poisoned) from neighborhood of Lake Tanganyika, Africa. Mrs. John Currie.

16,854. Native made copper wire. Bailundu, S. W. Africa. Mrs. John Currie.

16,855. Shallow clay dish of native make, Bihe. Angola, S. W. Africa. Mrs. John Currie.

16,856. Wooden bowl, Cisamba, Bihe, Angola. Mrs. John Currie.

16,857. Rope of native fibre and native manufacture. Bailundu Angola, Africa. Mrs. John Currie.

16,858. Fine pottery clay, near Bailundu, Angola, Africa. Mrs. John Currie.

16,859. Coarse pottery clay, near Bailundu, Angola, Africa. Mrs. John Currie.

16,860. Copper of native smelting, cast in the form of a St. Andrew's Cross, Garenganze country, S. W. Africa. Mrs. John Currie.

16,861. Working axe—iron blade, Bihe, Angola, Africa. Mrs. John Currie.

16,862. Anklets consisting of twelve small iron bells, like sleigh bells. Bihe, Angola, Mrs. John Currie.

16,863. Slave whip of rhinoceros hide—used in driving slaves to the coast, Angola. Mrs. John Currie.

16,864. Slave shackle of wood, used to fasten the feet of slaves during periods of rest on their way to the coast, Angola. Mrs. John Currie.

16,865. Iron ore, Bihe, Angola, Africa. Mrs. John Currie.

16,866. Two yards of native cotton cloth two-and-a-half feet wide Bihe, Angola, Africa. Mrs. John Currie.

From 16,848 to 16,866 were procured by the Rev. Walter T. Currie, the only Canadian Congregational Missionary in the Portuguese colony of Angola, West Africa, and are presented by his mother. The iron and copper mentioned in connection with any of the foregoing specimens are of native production, from the ore to the finished article.

16,867. Double-pointed flint, notched near the middle. Mrs. T. E. Craig, Lawrenceburg, Ind.

16,861. Small, light colored, chert arrowhead. Mrs. T. E. Craig, Lawrenceburg, Ind.

16,869-16,1877. Crania, from ossuary, in Innisfil township, Simcoe county. A. F. Hunter, M.A., Barrie.

16,870. Cranium very much deformed by frontal pressure, British Columbia. Miss Æ. R. Lingard Green, Victoria, B.C.

16,871-16,874. Crania, from ossuary, near old Fort Ste. Marie, Christian Island.

16,875. Soapstone pipe, tastefully carved human figure sitting on top of stem piece, with back to bowl, North shore of Lake Superior. John Monague, Christian Island.

16,876-16,878. Three clay pipe heads, lot 14, concession 3, Collingwood township, Simcoe county. A. F. Hunter, M.A.

16,879-16,880. Plain clay pipes perfect, with short stems, near Midland, Simcoe county. Arthur Crawford.

16,881-16,884. Clay pipe bowls, various patterns, near Midland. Arthur Crawford.

16,885. Pinch-faced and conical capped clay pipe, near Midland. Arthur Crawford.

16,886. Small water-worn stone, one and three-fourth inches long, mocassin-shaped—drilled at ankle portion—near Midland. Arthur Crawford.

16,887. Small string of beads, mostly of European make—near Midland. Arthur Crawford.

16,888. Large disc shell bead or gorget, and string of European and Indian beads. Dr. R. W. Large.

16,889. Fragments of a large and well-made clay pot. The rim, which is complete, varies from 13 to 14 inches in diameter, York township. Dr. R. B. Orr, Toronto.

16,890-16893. Four small pieces of native-made cloth, mounted between plates of glass: found in Florida. Clarence B. Moore, Philadelphia.

16,894, Large stone-headed club, with eagle feathers, North West Territory. J. Ross Robertson, M.P., Toronto.

PER A. F. HUNTER, BARRIE.

16,895. Small pipe, lot 14, con. 2, Collingwood township. John Bailey.
16,896. Stone axe, lot 16, con. 12, Innisfil. Robert Metcalf.
16,897. Three stone axes, lot 15, con. 12. John L. Warnica.
16,898. Bone chisel, lot 3, con. 8, Oro. Neil McNevin.
16,899. Stone axe, lot 18, con. 12, Innisfil. Robert A. Carr.
16,900. Bone awl, lot 21, con. 3, Vespra. Daniel Quinlan.
16,901. Porcupine's tusk, lot 21, con. 3, Vespra. Daniel Quinlan.
16,902. Stone gouge, lot 10, con. 8, Vespra. Peter Curtis.
16,903. Stone chisel, lot 20. con. 8, Vespra. Peter Curtis.
16,904. Stone axe (slate ?), lot 20, con. 8, Vespra. Peter Curtis.
16,905. Bone awl, lot 20, con. 8, Vespra. Peter Curtis.
16,906. Clay pipe-bowl, lot 20, con. 8, Vespra. Peter Curtis.
16,907. Clay pipe (mended), lot 20, con. 8, Vespra. Peter Curtis.
16,908. Clay pipe-bowl, lot 22, con. 8, Vespra. Thomas Dawson.
16,909. Stone axe or chisel, lot 22, con. 8, Vespra. Thomas Dawson.
16,910. Small axe or chisel, lot 21, con. 3, Vespra. Daniel Quinlan.
16,911. Piece of bone with perforation, lot 21, con, 3, Vespra. Daniel Quinlan.
16,912. Bone beads, lot 21, con. 3, Vespra. Daniel Quinlan.
16,913, Bone awl, lot 21, con. 3, Vespra. Daniel Quinlan.
16,914. Bone pin or bodkin, lot 21, con. 3, Vespra. Daniel Quinlan.
16,915. Pot fragment (drilled), lot 21, con. 3, Vespra. Daniel Quinlan.
16,916. Pointed bone implement, lot 21, con. 3, Vespra. Daniel Quinlan.
16,917. Perforated clam-shell, lot 21, con. 3, Vespra. Daniel Quinlan.
16,918. Columella of shell, with three perforations, lot 21, con. 3, Vespra. Daniel Quinlan.
16,919. Beaver's tusk (fragment), lot 21, con. 3, Vespra. Daniel Quinlan.
16,920. Bone chisel, lot 4, con. 8. Oro. James Davis.
16,921. Pointed bone, lot 4, con. 8, Oro. James Davis.
16,922-16,992. Seventy œolithic, palœolithic and neolithic specimens, from various localities in England, Ireland and France. From the Rev. R. Ashington Bullen, Reigate, England.
16,993-16,995. Three specimens brought by Seton-Karr, from Somaliland, Africa. Rev. R. Ashington Bullen, Reigate, England.

16,997. Rattle, as used in the Choogichoowiktook, or Serpent Dance, of the Nova Scotia Micmacs. The dance was said to symbolize the Pleiades, and the rattle to symbolize the rattle of the rattlesnake. Stansbury Hagar, Brooklyn, N.Y.

In addition to these, Mr. George E. Laidlaw, of Balsam Lake, has placed in the already large collection from his neighborhood, several hundred extremely valuable specimens, including clay pipes, many of which are quite unlike any previously in the museum ; clay and stone gambling (?) discs ; bone awls or needles, one of which is ten inches long, and ornamented on one side with incised lines, forming an irregular pattern ; hammer-stones, celts, rubbing-stones, carbonized corn, beans and cherry-stones, besides numerous miscellaneous articles, including a great many fragments of pottery, some of which, it is hoped, may be matched and united. A large portion of this collection has been procured by Mr. Laidlaw's sifting carefully the material forming ash-beds on old camp-sites. All the specimens found thus have been kept in groups, and carefully numbered, and it is proposed to preserve this method of arrangement, so far as the Balsam Lake country is concerned, thus to show, at a glance, all that has been left to represent the domestic economy of the old-time Indian.

NOTES ON SOME SPECIMENS.

Methods of Working.

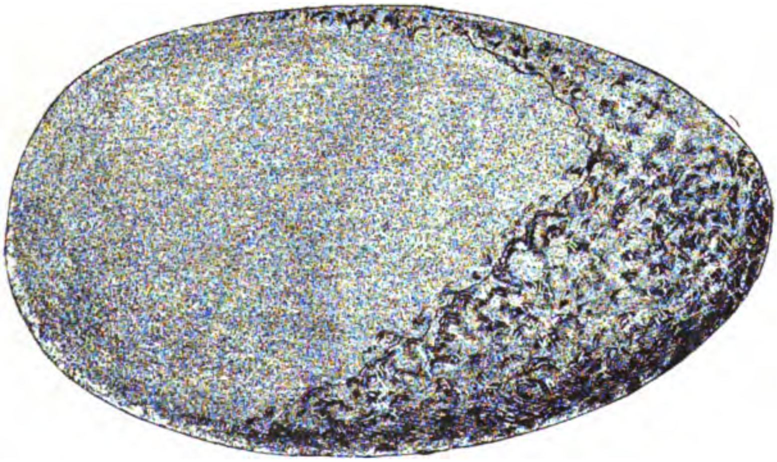


Fig. 1—⅔ diameter.

Illustrative of steps in primitive man's attempts to supply himself with tools from the materials that lay nearest to his hand, specimens like the one figured here, are full of interest. It is a dingy bluish argillaceous pebble, nearly six inches in length, a little more than three in breadth, and less than an inch and one-half in thickness at the thickest part. The natural shape of this pebble has suggested to some ancient inhabitant its capability for adaptation as some sort of tool or weapon, probably a celt or tomahawk, but as it was not sufficiently symmetrical for his purpose he has proceeded to reduce it to the desired form by the primitive method of pecking.

Nearly half of the side shown has been subjected to this process, while the rest of the surface retains its original smoothly, water-worn appearance. On the opposite side fully five-sixths of the whole surface has been pecked.

To some event that frustrated the old workman's intention, we are indebted for this instructive specimen, which was found in the township of North Easthope, Perth County and presented to us by Mr. Hugh Nichol, of Stratford.

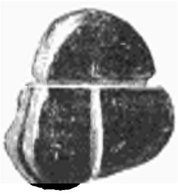
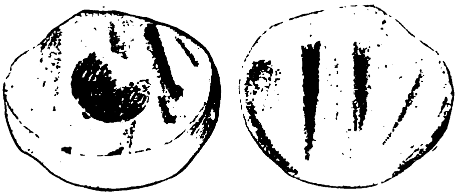


Fig. 2—½ diameter.

This piece of soapstone has been deeply notched, probably with the intention of cutting it into three or more pieces, but perhaps only for a kind of rude ornamentation. The value of the specimen consists not so much in what it may have been meant for, as for the reason that when closely examined one can see how the work was done, even being able to tell the order in which the notches were made. It was found by Dr. W. L. T. Addison, (no locality).

DRILL REST.



Figs. 3 and 4—Full size.

Figures 3 and 4 show in full size both sides of a stone that seems to have been used as a head-rest for a fiddle-bow drill. The shallow pit on one side does not look like the beginning of a perforation. Bearings of this kind must have been in frequent use to place against the forehead, the chin, or the chest, when the drill was worked by one man. Perhaps the chief objection to this supposed use is the small size of the stone. It was found in an ash-bed, by Mr. Laidlaw.

CLAY PIPES.

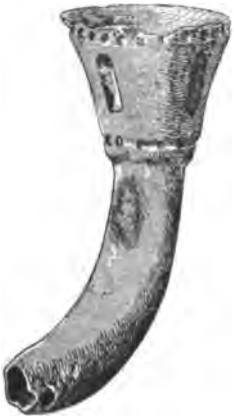


Fig. 5—½ diameter

This large and rather gracefully formed pipe is from Bexley township. The stem—once much longer—has been ground or rubbed down for comfort to the smoker, and the hole has been enlarged as if at some time it was intended to insert a wooden stem. Found by Mr. Geo. E. Laidlaw.

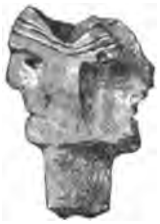


Fig. 6—½ diam.

The two-faced clay pipe is somewhat damaged on one side. Since the loss of its stem the fractured end has been rubbed down and rounded off at the edge, and the generally smooth and worn-looking surface of the whole outside, seems to show that it has been carried about for a considerable time as a bangle, or other personal ornament. The large fracture on the top of one side has been made since the pipe was last used--perhaps it was done by the plough or the harrow.

The clay is of exceedingly close texture, showing a few particles of mica. It was found on lot 5, concession 5, Bexley, the farm of Mr Wm. Irwin, on which many fine specimens have been turned up with the plough.

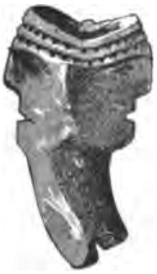


Fig. 7—½ diameter.

Another pipe of this kind is illustrated in figure 7. This one was also found by Mr. Laidlaw, near Balsam Lake and is a fair specimen. The eyes and mouth are marked by depressions made by means of a slightly square-edged tool.

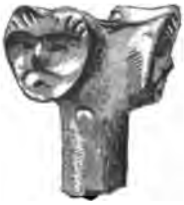


Fig. 8—½ diameter.

Pipe-bowls ornamented with two human faces are not very common, but this is the only one I have seen that has, or rather, had three, for it is quite apparent that one has been broken off. They are of a common conventional type, requiring but little more to produce them than is possible with a few finger-pinches. This specimen is from lot 5, concession 5, Bexley.

An expressive face appears on this fragment of a pipe bowl, from lot 5, concession 5, Bexley. Although the workmanship is rude, it possesses much dash, and shows attempts at portraiture that one seldom sees in Indian art.

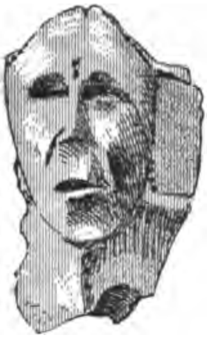


Fig. 9—Full size.

We have here not only an upright furrow or wrinkle over the nose, but we have the cheeks sharply marked off from the nostrils by a diagonal channel at each side. This is the only example of the kind I have ever seen in Ontario specimens—even in Aztec representations of the human face, this feature is very rare. The nostril holes are carefully marked by means of two small punctures no larger than a pin-point, and the lower lip and chin, which are usually failures in such attempts, are in this case well-formed, but the upper lip is weak and there has been no pretence made to form eyebrows.

The whole face, too, is much longer—more oval, than faces are usually respresented, and it is marked off from the rest of the pipe by a series of small holes, continued round the top of the forehead, which stands above the edge of the bowl.

This mask from a clay pipe is very inferior to that shown in figure 9, although some attention has been paid here also to detail. Like figure 9, the face is surrounded by a series of dots or slight punctures, but in this case they run across the lower edge of the forehead. Nostrils are roughly expressed; the eyes have been made by a round pointed instrument, and without much care, but the face is not wholly destitute of expression because some pains have been taken to indicate a few teeth. Found by Mr. Laidlaw on lot 5, concession 5, Bexley.

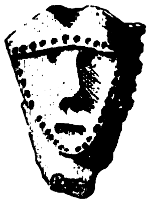


Fig. 10 - ½ diam.

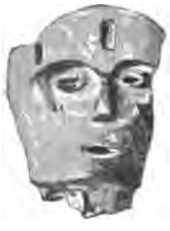


Fig. 11—½ diam.

Another pipe mask is shown in figure 11. In this case some trouble has been taken to form eyeballs, and to make them oval, and deeply pitted; and a fairly good nose without nostrils marks the face, but every other feature is poorly brought out, especially the chin. This pipe-bowl has been blackened, and retains its color very well.

The (Fig. 12) strongly marked, yet expressionless face is on a pipe found near Victoria Harbor, and belongs to Dr. R. W. Large's

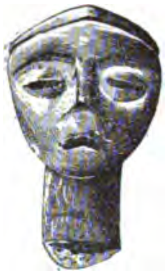
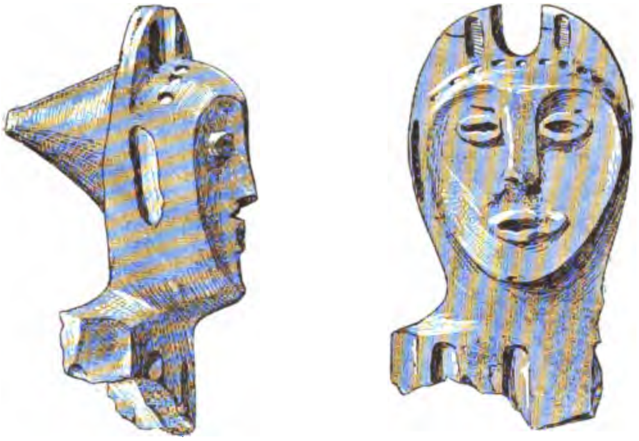


Fig. 12 – ½ diam.

collection. The pipe is unusually thick—from three-eighths to five-eighths of an inch on the face side. The hole in the bowl, shows that it has been enlarged by means of cutting since the pipe was moulded. The eye-balls are very roughly worked up, and occupy much of what should be the cheeks. The mouth, fully five-eighths of an inch deep, is connected with the inside of the bowl, the inner end of the hole being very small and round. Perhaps the intention was to show smoke issuing from the mouth of the mask simply for its comical effect, when the pipe was in use



Figs. 13 and 14. Full size.

The somewhat odd-looking mask from a pipe, illustrated above, was found near Woodbridge, York county, by Mr. Robert Cowling. The two projections on the head of this mask, as well as the larger one behind, may have been intended to represent a fashion in hair-dressing. The face has been very carefully worked, and the finish is unusually good. The eyes and mouth are indicated by slight elevations.

This pipe-bowl has a face quite unlike anything else in the museum, there being a very decided hollow at the junction of the nose with the forehead—the eyeballs are raised, and more attention has been paid to giving the cheeks a natural appearance than is usual. Originally, as with most clay pipes, this one had a stem; when it was broken a hole was bored through the mouth for the insertion of a wooden one.

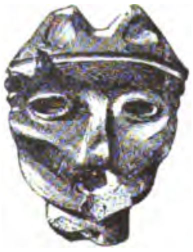


Fig. 15, ½ diam.

In fig. 15 we find the same kind of elevations as in figure 14 and somewhat less so in figures 8 and 10 and suggesting a mode of doing up the hair, perhaps after the manner of the Cheveux Relevés, of whom Champlain said, "Not one of our courtiers takes so much trouble in dressing his hair" [as they do]. This pipe was found by Mr. Geo. Laidlaw near Balsam Lake.

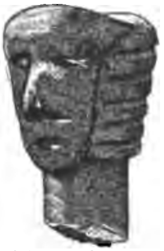


Fig. 16, ½ diam.

The workmanship on the pipe here illustrated is very coarse, and almost expressionless except that there has been an attempt made to form an aquiline nose, and there is a slight depression where it joins the brow. The pipe is heavy and clumsy, the side bearing the face being over an inch in thickness. G. E. Laidlaw, Bexley.

Fig. 17 represents another clay pipe on which is moulded a human face. A little care has been taken to indicate eye-brows, but as usual, the chin is weak. Found by Mr. Geo. E. Laidlaw, in Bexley township.

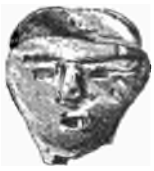


Fig. 17, ½ diam.

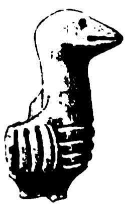


Fig. 18, ½ diameter.

This somewhat spirited imitation of a bird's head surmounts the edge of a clay pipe found by Dr. R. W. Large, near Vasey, in Simcoe county.

There is scarcely enough character about it to enable one to say any more than it is just a bird's head, in which respect it differs from another head on a pipe bowl found by Dr. W. L. T. Addison, on the 7th concession of Whitchurch, York county. Respecting the lattter it would seem plainly the intention to represent the head of the passenger pigeon. The workman has moulded well marked rings for eyes, and there is a groove extending from the lower end of the neck to the tip of the lower half of the bill to represent an anatomical feature.

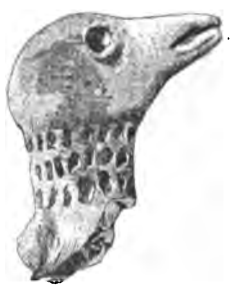


Fig. 19 about ⅞ diam.

It may be that the markings on the neck are intended to indicate feathers.

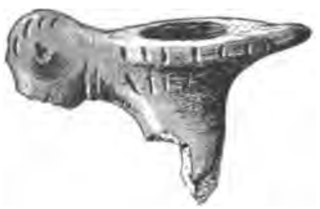


Fig. 20 ⅔ diameter.

Figure 20 imitates a bird-forn , the beak being broken. The tail feathers are indicated by a few lines on the upper surface. The design of this pipe reminds one of more southern types of pottery. Found near Balsam Lake,by Mr. Laidlaw.

STONE PIPES.

But for the fact that on the back of the specimen here figured there remains a slight hollow, one would scarcely suppose that this stone head had once formed part of a pipe bowl. Considerable care has been bestowed in the carving of this head, for not only are slight elevations left to mark the eye-balls, but what is of still more unusual occurrence, eyebrows are faintly shown, and the chin is fairly well indicated—much better, indeed, than is brought out in the engraving; and 'Adam's apple' has been attended to also. The ears are rudely carved, but perhaps the chief failure is in the nose, the shortness of which gives the face a negroid appearance.

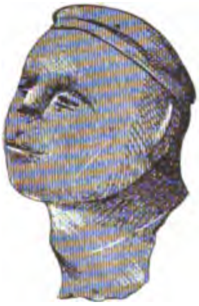


Fig. 21, full size.

The bonnet-like covering is somewhat unusual. Only on two other pipes among several hundreds in our collection does this occur—one a very fine stone head from lot 34, concession 7, Beverly, the farm of Mr. James Dwyer; and the other—part of a clay pipe found near Midland—not far from where this specimen was found, on the farm af Mr. Arthur Crawford. The stone is limestone; in appearance much like that of the Dwyer head. See report 1887-8, p. 46.

The crown of the cap still shows the workman's laying-out marks, namely, two very small pits near the centre, through which have been drawn two lines at right angles.

A few features of the work are suggestive of European influence, if not of actual touch.

Among some specimens procured last summer from the farm of Mr. Arthur Crawford, near Midland, is the stone pipe (figure 22) which, although much weathered, shows faint traces of human features. The material is a soft limestone. At the lower end may still be seen part of the hole, so commonly found in some pipes that are made to be used with a wooden stem, as in this case, the stem-hole being on the back of the bowl.

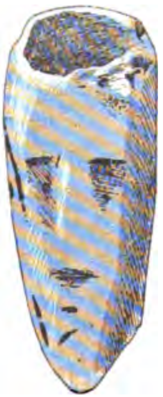


Fig. 22, full size.

This altogether unique pipe (fig. 23) is also of soapstone, nearly quadrangular in cross-section, the side shown and the opposite side being a little rounded. The projecting proportion seems intended to represent the head of some long-billed bird—perhaps a crane—but the lower portion of the back is broken off. At the base of the pipe there has been a hole for stem attachment. The stem-hole is behind, a little below the middle. Found near Balsam Lake by Mr. Laidlaw.

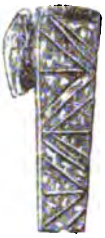


Fig. 23, ½ dia.

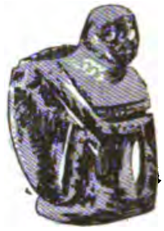


Fig. 24, ½ dia.

The pipe represented by figure 24 is of mottled soapstone, and is very rudely carved in imitation of a person seated, the arms resting on the knees. The right leg is broken. Between the feet is a small hole for a string to hold it to the wooden stem, which entered a hole nearly midway in the back. The lower side of the base is marked off into small squares Found in Bexley by Mr. Laidlaw.

STONE DISCS.

If stones of this kind were not used for gambling purposes, or in the playing of some game for mere amusement, it is hard to say in in what other way they could have been employed, Figure 25 is made darker on the side shown than on the other side, which is also marked with a cross.

Mr. Stewart Culin, Curator of the University of Pennsylvania Museum, in Philadelphia, is now engaged in making a special study of aboriginal games and gaming appliances, and when the results of his researches appear in print, no doubt some light will be thrown on the use to which objects of this description were put.

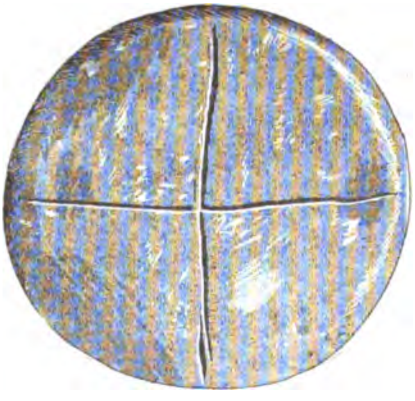


Fig. 25, full size.

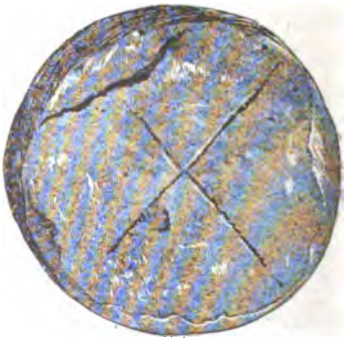


Fig. 26, full size.

Similar to the former is the stone represented by figure 26, but the latter is smaller and less carefully made of what seems to be

Hudson River shale. The face not shown retains a good deal of light-colored limy-looking matter that may have been used to distinguish the sides readily. On it also an additional line runs half way across one section, but this may have been the result of bad workmanship only.

Both discs were found on the Arthur Crawford farm near Midland, in North Simcoe.

BONE.

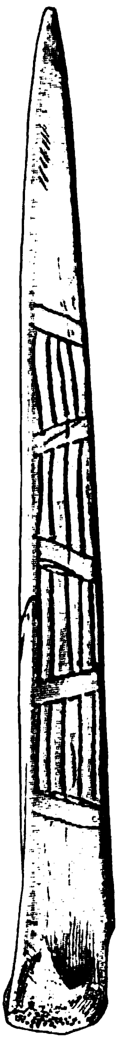


Fig. 27—½ diameter.

The very fine specimen of bone tool or weapon here figured is ten and one-half inches long, an inch wide at the butt, and half an inch thick on the side to the left of the reader, the opposite side, or edge, being not more than three-sixteenths of an inch in thickness. It is plainly split or otherwise worked from a leg bone, perhaps a deer's. The side not shown in the cut is hollow. The markings shown are grooves about 1 m. deep, and seem to have been produced purely for ornamentation.

This specimen was found by Mr. Laidlaw on a village site, lot 5, concession 5, township of Bexley. He refers to it in his notes as a "dagger." It may have been employed as such, but as the side of the point shown in the engraving is worn smooth, apparently from usage, while the other side still show the scratches that have been made in reducing it to shape, the inference is that it rather served the purpose of a tool, and one, too, which, notwithstanding its great size, has been employed in light work, hollow side up, the forefinger of the worker resting in the natural groove.

It is the largest bone tool of this type that has reached the museum.

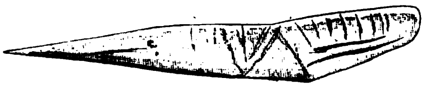


Fig 28—½ diameter.

Bone awls or "needles" seldom bear marks of any kind, by way of ornamentation. The one illustrated here is an exception. Some of the marks near the butt end may have been counters. It was found near Emery, York County, by Dr. R. W. Large. It is not improbable that awl-like specimens so ornamented were used as dress-pins rather than as borers.

The two-barbed, harpoon-like weapon shown by figure twenty-eight, was found by a Mr. Bell, near Waverley, Tay township, in the old Huron country. It was in a very good state of preservation. It forms part of the Dr. Large collection.

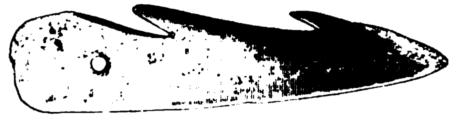


Fig. 29—½ diameter.

SHELL WORK.

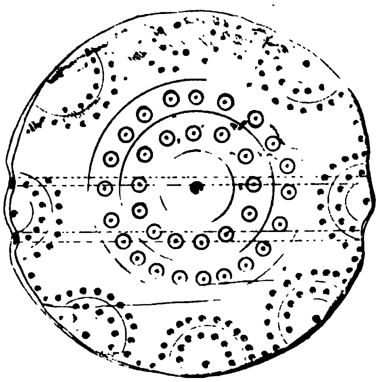


Fig. 30—⅞ diameter.

Figure 30 represents a very well made bead, or gorget of shell, the material being part of some conch of sub-tropical habitat.

The three concentric circles in the middle and the arcs on the margin have been described from central points by means of something answering the purpose of compasses, as have also the smaller circles surrounding the dots. The pattern has been carefully laid out, and quite as accurately worked out. Although not more than an eighth of an inch in thickness on the edge, and about three-sixteenths in the middle, two holes having a diameter of two millimeters are bored from edge to edge, as shown by the dotted lines, which are not on the specimen itself, The extremities of the holes bear evidence of much wear.

This very fine specimen was procured by Dr. Large near Penetanguishene, Simcoe County.

COPPER.

Not many finds of native copper relics have been made north of Lake Simcoe. What we call a spear is from Bexley township, but it may have been a knife, the purpose of which it would serve very much better. When fresh from the smith's hands this must have been a very beautiful object—the blade is quite thin, (almost too much so for thrusting) and has been highly finished. The socket looks as if it had been shaped on a mandril. This specimen was found by Mr. M. Sayers, of Bexley.

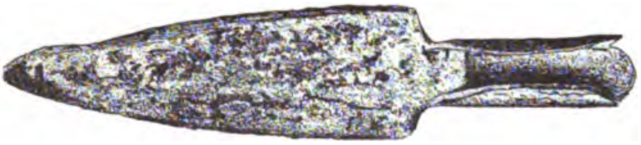


Fig. 31.—½ diameter.

TEXTILE WORK.

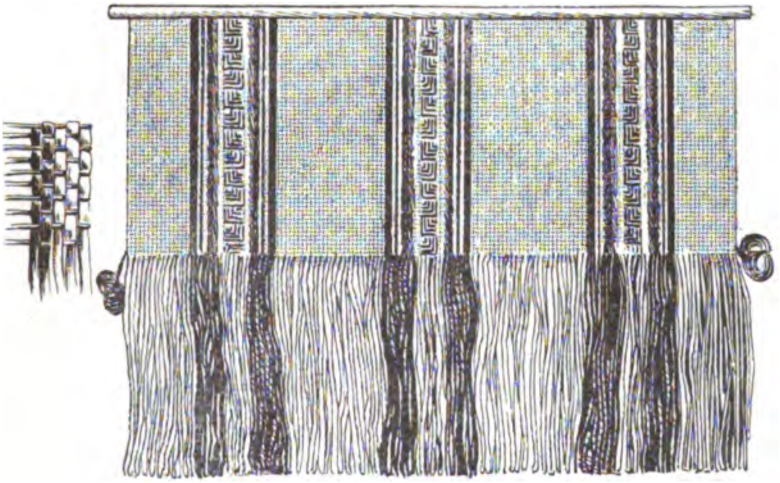


Fig. 32.—Grass Mat, (Ojibwa) Sturgeon Falls.

When examining a collection of Indian relics, although there may be much in it from which it is possible to arrive at some knowledge of aboriginal home life, it should always be remembered that a vast quantity of primitive workmanship has nothing to represent it in our day. Almost everything of hide, of wood, and of vegetal material generally, has disappeared. Now and again we meet with fragments of matting and of coarse cloth, that fall to dust before any examination of the texture can be made. This, however, is enough to show us that the Indian woman of old added the work of the weaver to her numerous other duties. Nor has the art been wholly lost. Navajo blankets are to-day produced in considerable quantities for commercial purposes, on account of certain valuable or peculiar features in their make-up, perhaps more especially in their designs. British Columbian Indians yet weave water-tight buckets from spruce roots, and natives in districts remote from European influence continue to produce coarse fabrics after ancient methods although they make little, if anything, that may be used for clothing purposes.

When at the Hudson Bay Post, Sturgeon Falls, near Lake Nipissing, in the summer of 1892, I was much interested in the mat-work turned out by the Indian women of that neighborhood, and with the kindly assistance of Mr. Ross in charge of the Hudson Bay Company's store, I succeeded in getting from an Indian woman a rush mat, half finished, and still attached to the upper bar of the simple loom on which the warp was stretched. Besides the bar mentioned, (as seen in the engraving) the loom consisted of an upright pole at each side, one end of which was fitted into a hole at the extremity of the cross-bar, while the other rested on the ground. When in use, this primitive apparatus stood at a slight inclination from the weaver, the upper bar being supported by the wall of the dwelling, and the weaving process consisted of passing a stout cord as woof, in and out among the dependent rushes, to produce the desired pattern, which, in this case, is not unworthy of the best designer in Huddersfield or Heckmondwyke, the body of the mat being of the natural straw-color of the rushes, while the pattern is worked in strips of dark red, blue and green, the dyes being of vegetable origin, rich, but quiet in tone.

Before very long we shall be unable to become possessed of such specimens, and an effort should be made at once to collect every available type-sample of woven work from the hands of our Indians.

But although, up to the present time, we have been unable to get many well preserved specimens of the finer sorts of fabric, we are fortunately in possession of some fragments found by Mr. Clarence B. Moore* in Florida, during his extensive and exhaustive explorations in that State.

On first thought, one may be tempted to suppose that there can be no reasonable standard of comparison between the products o places so far apart and so diverse in character as are Ontario and Florida, but we have the very best of proof that between these points there was considerable interchange of material in pre-Columbian days, and to such an extent has this influence been marked, that Mr. Frank Hamilton Cushing in a letter to a Toronto friend has written: "These [the Ontario Archaeological collections] are easily the first representative of Dominion territory in existence, and they are invested with more than ordinary interest and value as being representative also in part, of the ancestral Huron-Iroquois stock, and in part of a culture, growth and development in art of the aborigines of this part of Canada, that far exceeds anything I had been led to expect.

---

* These specimens, neatly mounted between plates of glass, form part of a valuable gift made to us by Mr. Moore this summer; see numbers 16,376 to 16,450 and 16,890 to 16,893, in preceding list of additions to the museum.

"The conventional side of art is exemplified in several of the pipes, stone and terra-cotta, particularly in the little fox-head pipe, (which exhibits such remarkable and regular eye and lip marks) both approaches and suggests the characteristic art of the Mound-Builders, and this, taken with the presence in the same collections of Gulf varieties of the Busycon shell, wrought for all the world as were like objects found by me in the Keys of Florida, extends still further the influence of the very remarkable and highly developed arts of those far southern lands.

"This is so far true that in the report I am now preparing for the Government and the University of Pennsylvania, I shall find it almost indispensable to make studies of those collections and secure, if I can, figures of some of the specimens that illustrate these points.

* * * * * * * * * * *

"All these features are unique, yet abundantly illustrated in the Toronto collections and render them, as a whole, one of *the* collections of this continent."

Apart from Mr. Cushing's strongly corroborative testimony, we may readily understand that the knowledge of an art so conducive to appearance and comfort as weaving is, would speedily extend itself over an area corresponding to the extent of territory capable of producing the required materials. There need, therefore, be no hesitation in offering the fairly well-preserved Florida specimens to illustrate the condition of an Ontario art of which it is difficult to procure illustrative specimens.

All the figures are magnified from four to five diameters for the purpose of bringing out distinctly the character of the meshes.

On of the clumsiest, but strongest arrangements of warp and woof is that shown by means of figure : 3. It differs to the extent of only one or two degrees from the simple 'in and out' texture of the Ojibwa grass-mat, figure 32. Here the woof is made to bind two and three strands of the warp in place of only one to another, and in addition to this, the cross threads are made to form loops, passing under four and coming back over two or three warp-strands, and this in such a manner, that the same strands are not bound by adjoining threads of woof. A somewhat similar device was shown to have been employed in the porcupine quill work, figured and described in the fourth Archæological Report 1890-91, p. 23.

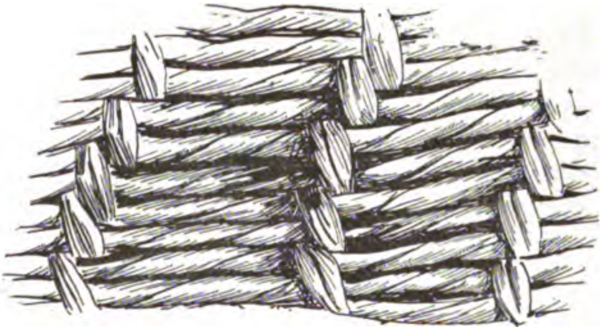


Figure 33—Four diameters.

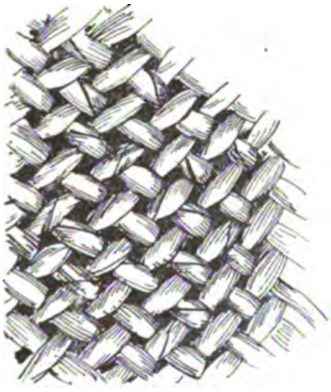


Fig. 34—Four diameters.

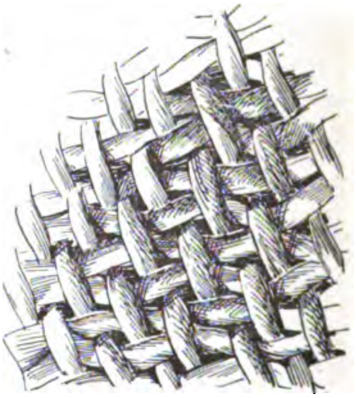


Fig. 35—Four diameters

In figure 34 we see the ordinary, alternate, interlacing of threads just as the work is done by a common loom to-day. In appearance this arrangement is superior to that shown in figure 33, which, however, in point of strength and durability, must have had the advantage.

A much more complicated disposition of the threads appears in figure 35, and one still more so is seen in figure 36, where the mesh is of such a character as to make it difficult for us to understand how the weaving could have been performed without the assistance of some mechanical device that has hitherto escaped observation.

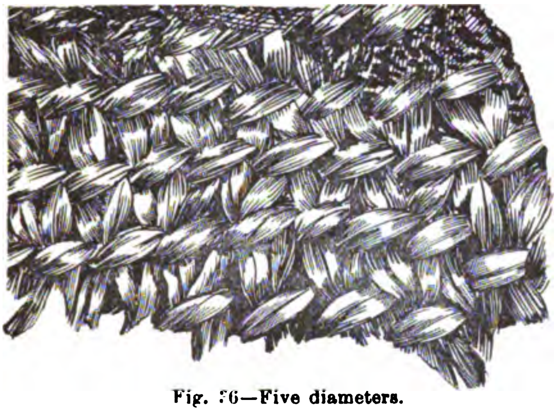


Fig. 36—Five diameters.

Although the specimens figured are now of a dark brown color, we can scarcely doubt that at one time they possessed highly colored patterns, for if there is one thing more objectionable than another to an Indian eye it is lack of brilliancy in hue.

Since the foregoing was written I find that I had overlooked two fairly well-preserved specimens of cloth found by Dr. T. A. Beeman and myself near the east shore of Baptiste Lake, Hastings County, in 1891. In color and general appearance these are almost identical with the Florida specimens, but the threads are somewhat coarser.

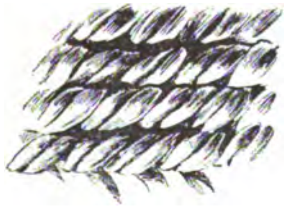


Fig. 37—Two diameters.

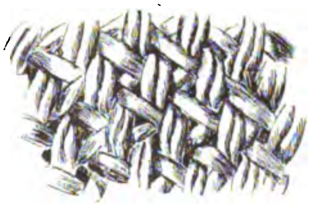


Fig. 38—Two diameters.

The accompanying figures show the character of the mesh in both of these specimens.

It is not quite easy to see how the strongly twisted warp in figure 37 is held together, as the fibre is in a too fragile condition to admit of being handled for examination, but such is not the case with the other specimen, as shown by figure 38, in which both warp and woof may be easily distinguished In each of these specimens it will be observed that the texture is different from that of any of those from Florida, and it is nearly as certain as anything can be that meshes of numerous other arrangements will yet be found in this Province.

Those who may be desirous of pursuing the study of this department of primitive handicraft are recommended to read a most original and exhaustive paper on the subject by Mr. W. H. Holmes in the report of the Bureau of Ethnology, Washington, for 1891-92

MEDICINE MASK.

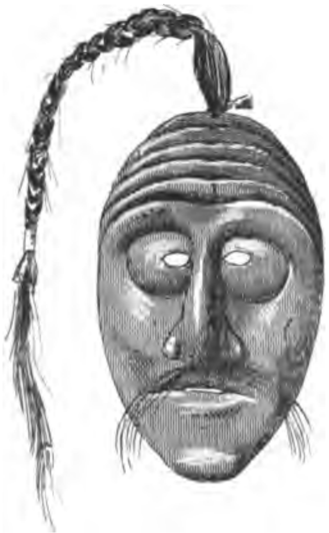


Fig 39

The use of masks for dances and 'mummery' purposes is perhaps as universal as is any human device, and it is not by any means confined to those we called savages, as, witness carnivals, masquerade balls, and theatrical performances. The savage, however, did not employ masks so much for disguise, as to render himself hideous, or awe-inspiring, and he delighted in those that represented bears and other animals, as well as human-looking faces. Fig. 39 is of wood, fitting well under the chin and over the forehead. It is painted red, and among other reasons for believing that it is not very old, is the fact that the bulging eye-balls are made of thin metal. Still, as these pieces are fixed over much larger holes in the wood, this may be only a modern addition. The tuft is of horse hair.

Miss Pauline Johnson, from whom this mask was procured, says it belonged to the late chief Ska-na-wa-ti, a celebrated Onondaga Fire-Keeper.* who was also a 'big medicine man.'

---

*The office of "Fire-Keeper" among the Iroquois, is hereditary, and confined to the Onondagas. It is the Fire-Keeper's duty to take charge of the wampum belts, and to memorize their records. We would, perhaps, call him an *Archivist.*

This is the mask he used when performing his incantations for the making of 'medicine.'

BRASS TOMAHAWK.

Reference has been made in former reports to iron tomahawks of various patterns bearing British and French marks. In many parts of Ontario, these frauds on the Indian are yet turned up with the plough. The best type of tomahawk, however, is comparatively rare. In it the pole is drilled to form a pipe bowl, the handle being bored for use as a stem. Tomahawks of this kind are usually supposed to have been for presentation to chiefs and leading braves, but no doubt many of them were exchanged for peltry. Brass tomahawks are of extremely rare occurence. The one here figured is in the Laidlaw collection, and was found near Balsam Lake. It is of graceful form, somewhat elaborately chased and otherwise decorated, and although not more than one-fourth as heavy as the largest iron weapons of this kind, must have proved much more serviceable as a cleaver in war, or as a calumet in times of peace, only that in the latter case no Indian would degrade himself by smoking anything but a good-old-fashioned stone pipe, as all his people had done before him.

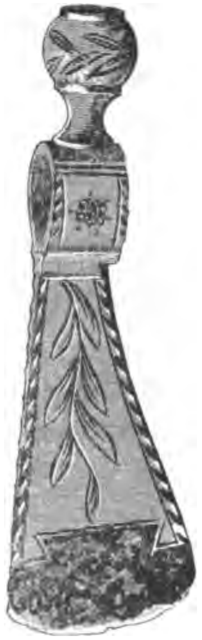


Fig. 40, ½ dia.

Unlike many of the tools and other things supplied to the Indians, this is a piece of honest work—beautiful and useful. The latter quality it possesses from the fact that the 'bit' is of steel, neatly dovetailed into the brass, but not soldered. I have used the word 'steel,' although the material is as soft as iron, on the supposition that the 'bit' has lost its original hardness since the time it was dropped, a hundred years or more ago.

THE JESUIT STONE.

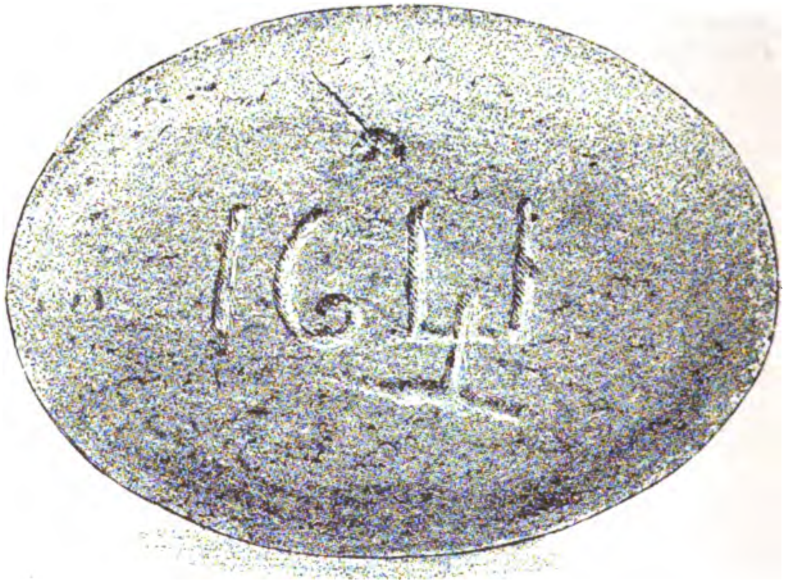


Fig. 41

The story of the stone here illustrated we can only guess at so far as the rude carving of the figures is concerned. The stone itself is simply a water-worn one, eight inches long, five and a half inches wide, and three inches thick. It is very regular in form, and perhaps on this account was chosen for a recording purpose by him who, presumably at that date, carved thereon "1641." Found on lot 24, concession 5, (the farm of Mr. Murray,) township of Vaughan, and County of York, we know of no Europeans who were in this part of the country at that time except the Jesuit Fathers, Brèbeuf and Chaumonot, who in the spring of that year returned from a fruitless mission to the country of the Neutrals, and were then on their way to Ste. Marie (on the Wye).

The exact route followed is uncertain, but there seems to be some reason for the belief that not far from where this stone was found, stood the Indian lodge mentioned in the *Relations* as the asylum of the well-nigh famished priests on their homeward journey. The story as briefly told by Parkman is as follows:—

"The mission was barren of any other fruit than hardship and danger, and after a stay of four months, the two priests resolved to return. On the way, they met a genuine act of kindness. A heavy snow-storm arresting their progress, a Neutral woman took them into her lodge, entertained them for two weeks with her best fare, persuaded her father and relatives to befriend them, and aided them to make a vocabulary of the dialect. Bidding their generous hostess farewell, they journeyed northward, through the melting snows of spring, and reached Sainte Marie in safety."

Dean Harris in his History of the Catholic Church in the Niagara Peninsula, Appendix B., page 339, discusses the "Jesuit Stone" somewhat thoroughly, and any who may be interested in this matter cannot do better than refer to the Dean's volume.

STONE TOOL WORK.

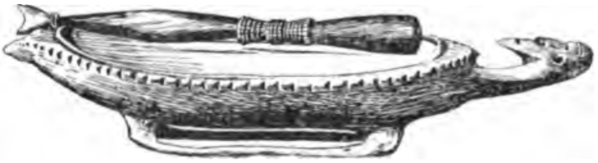


Fig 42, 3½ feet long.

It is always difficult for us to understand how early man accomplished so much as we know he did, with the primitive appliances at his command. There is no doubt that he employed fire, to a large extent, in the felling of trees, and in the shaping of boats, and of many other wooden articles, no trace of which now remains.

We are not warranted in supposing that our Indians ever made any but the simplest attempts in wood-carving, still, even these must have been slow and laborious. But he was not in a hurry. No master demanded a 'stint'—in fact he had a lifetime, long or short, before him for the accomplishment of his task.

Fortunately we possess a very good example of wood-carving executed by a savage in the 'stone age'—an age that but recently existed in many of the Pacific islands, and which, perhaps, exists in some of them yet, as it does also in other places. The example referred to is shown in figure 42, which represents what the white man calls a 'pudding-dish,' or a vessel in which the New Hebridean pounds his bread-fruit, and mixes it with cocoa-nut milk. The pounding-stick is seen lying on the top of the 'dish.' The wood of which this utensil is made is of close texture, very hard and heavy, and resembling logwood, or old mahogany, in color. It measures nearly three and a half feet in length, and one may see at a glance the amount of labor that has been required to hew, or hew and char, this 'pudding-dish' from a log. As is not unusual, the workman aimed at producing something ornamental as well as useful, and here we have not only two long feet or rests (not at all necessary), but a notched margin all round, and a fairly well executed human head and neck. The pounder, too, is quite ornate. For this and numerous other equally instructive specimens, we are indebted to the generosity of the Rev. Dr. Joseph Annand, at the head of the Presbyterian mission in the New Hebrides.

RECENT PRIMITIVE POTTERY.

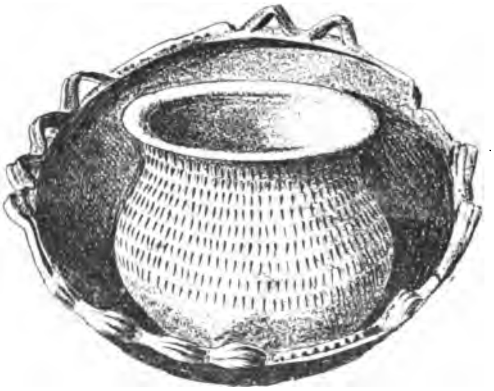


Fig. 43,

Students will find the specimens of pottery here figured of great interest for comparison with clay vessels found in various parts of America.

The two vessels are very different in style and appearance—so much so that one would not recognize them as being from the same locality—the New Hebrides Islands. The larger vessel is dark in color, and does not look as if it had been very well burnt. It is eleven inches in diameter, and only about three inches deep. The smaller one (6½ inches in diameter) is bright red, and seems to have been thoroughly burnt. Not only do the shapes differ but the styles of decoration are totally dissimilar. The latter is, probably, of more modern production than the former, but on this point there is no information. From Rev. Dr. Joseph Annand, New Hebrides.

CHRISTIAN ISLAND.

When the Hurons were driven from Sainte Marie in March, 1649, when, in fact, as a nation, they had ceased to exist, their condition was most pitiable. Even without an insatiate enemy to face they would have found it difficult to maintain an existence, for but little was left of the last year's miserable harvest, and the season was not far enough advanced to afford even a bare sustenance from the roots, bark, and leaves, to which the natives were not unfrequently compelled to resort during similar periods of scarcity.

Utterly disheartened by their misfortunes, and knowing full well that as long as a Huron lived the Iroquois would hunt him to death they destroyed all their villages, and betook themselves to such places as they thought most likely to yield them protection.

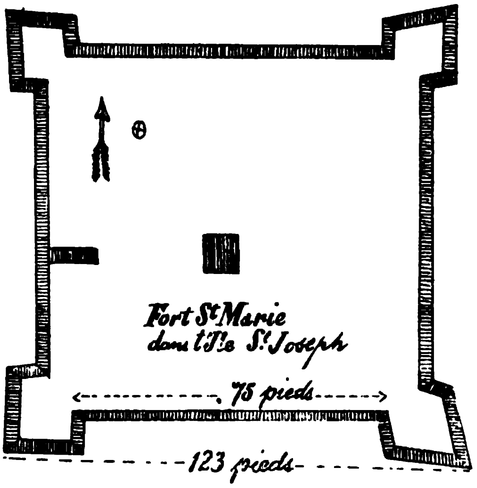


Fig. 44. (From Ducreux' Map.)

At first the Missionaries and those who remained with them resolved to betake themselves to Manitoulin Island, but afterwards, on the representations of twelve Huron chiefs who had been absent when this decision was arrived at, they determined to form a settlement on the island of Ahoendoé,* which was known to the Jesuits as Isle St. Joseph, in honor of the saint to whom Brébeuf had dedicated the mission.

It required three hours for these chiefs to convince their brethren and the missionaries that Ahoendoé was preferable to Manitoulin,† or, as it was known to them, Ekaentoton.

---

* Ahoendoé. Perhaps the pronunciation would be better represented to English readers as *Ahwhendway*. On some maps it is called *Charity Island*, the adjoining and smaller ones being marked *Faith* and *Hope*.

† Manitoulin is of Objibwa origin.

Everything movable was transferred from Ste. Marie to St. Joseph and the old fort was set on fire to prevent the Iroquois from gaining any advantage by its possession.

Near sunset on the 14th June, 1649, the fugitives embarked with all their possessions, on a boat and raft, both of which had been constructed for this occasion.

Without any assistance from wind, the voyage was a most laborious one for the half-starved creatures, both white and red, who were crowded on the craft; and we are told that "several days elapsed before they reached their destination" on Ahoendoé Bay, about twenty miles westwards, by the circuitous route they had to follow, although scarcely more than fifteen in a direct line.

Here they built a fort, and named it Sainte Marie, in fond remembrance of their hopes and disappointments during upwards of ten eventful years, in their similarly constructed place of defence on the mainland.

The works themselves have been described in narratives by the priests,* and frequent references have been made to them by subsequent writers, but in view of the fact that such articles are not generally available, and on account of the interest that is now more widely taken in all that pertains to the history of our country, the Minister of Education expressed a desire that the old Ahoendoé fort should be carefully examined—if possible, explored—and the results made public.†

I accordingly spent several days on the Christian Island about the beginning of October, the intention being at the outset to lay bare all, or part of the foundation of the walls, and to make openings here and there within the enclosed area. The condition of the walls, however, is such as to require a much larger expenditure in money and time than I was authorized to incur, and the swampy nature of the soil was not conducive to successful digging deeper than a foot or eighteen inches.

In its present state the place is scarcely more than recognizable as having been the site of a building, for the inland wall is but little above the ground level, as are also the inland ends of those that run back from Ahoendoé Bay, most of the stones having been removed to assist in building a pier or landing place for steamers, a few hundred yards away. The lakeward half of the fort is covered with heavy underbrush, and some portions of the old wall still stand about three feet high, the original face being in full view.* See figure 45.

---

* Raguenau in his Relation des Hurons, 1650, supplies many details, and the appendix to Bressani's Relation Abrégée, (Montreal 1852), not only gives measurements, but plans of both Forts Sainte Marie.

† Mr. Bonner of the Collingwood Col. Inst. in correspondence with the Department, directed attention to the desirability of this work.

The first thing that must occur to a visitor, here, as well as at Ste. Marie on the Wye, is that the choice of situation for defensive purposes was European rather than Indian, for it is within forty yards of the present lake level, and as the water was probably higher then than it is now, the shore wall may not have been originally more than fifty feet distant. Our Indians, on the contrary, usually selected as places of abode those that were half a mile or more from any point approachable by canoe. The modes of defence and attack in each case make the reason obvious.

The sides of the structure correspond with the cardinal points, the south wall being parallel with the shore line. This wall is said to have been fully twelve feet high, and it is not likely the others were much less. The enclosure was in the form of a square, the opposite sides of which were one hundred feet apart, with a bastion at each corner.

The choice of this spot for the fortification would seem to have been made on account of a strong spring which rises as nearly as possible in the centre of the works. This spring had been walled up to form a large oval well, the exterior diameters of which were six and twelve feet, but scarcely any of the structure is now in position. On the south edge, at the outlet, the wall is quite gone, so that what remains has a horseshoe appearance.

All the masonry has been put together with lime mortar, a fact that illustrates not only the great pains that were taken to render the place one of security, but the intention—perhaps, rather the determination, to render it a permanent abode.

In connection with the production of lime for so extensive a work in such circumstances, it may be mentioned that, Solomon Mark, an Indian of Christian Island, volunteered to the Rev. E. T. Douglas and myself, the statement that he had discovered, about fifteen years ago, within some fifty or seventy-five feet of the fort, what he described as "a pit, nearly twelve feet in diameter aud six feet deep, filled with lime," and that this lime was used by the villagers for whitewashing purposes. In any case, the material in question could hardly be called *quick* lime, but it appears almost certain that it must have been produced when the fort was erected, and suggests to us the method that was probably adopted by the builders to supply themselves with what was so necessary for their purpose, namely, the digging of a pit to hold a considerable quantitiy of wood upon which were piled lumps of limestone. Even more primitive plans are sometimes followed by pioneer settlers, as when they simply throw a few stones into a burning log-heap on the surface of the ground, and succeed thus in getting a modest supply of lime for "chinking" * purposes. As the soil here, for several hundreds of yards inland, consists chiefly of sand, but little damage would ensue from the inevitable mingling, to some extent, of the two materials.

---

* Editorial note in Bressani's Relation Abrégée, page 333.

"Fort Ste. Marie on St. Joseph's Island (now known as Charity or Christian Island), is built, as we learn from history, on the south-east side, at a little distance from the shore. Its ruins shows to advantage on the now deserted ground. They were measured June 21st, 1845. In 1848. while digging among them, some curious objects were found which afford proof of historic traditions. The most remarkable of these, and that which attracted and had with good reason, the most public attention, was a mould to make wafers. It was at once purchased by an amatuer and sent to an English museum."

The inland portions of the fort are constructed mainly of flat stones, that look as if they had been removed from ledges along the shore (whence, perhaps, also were procured those required for burning) but the shore-wall and the southern portions of the other two connected with it, consist chiefly of stones that are somewhat waterworn, leading one to conclude that this part of the fort was first built, and from material found lying loose along the water's edge, many of the stones being what are known as "hard heads," and of a size too great for a man to carry them very far.

That the stones were laid under European direction if not by European skill is evident, for care has been taken to "break the joints," a very simple and valuable device that was not known to such highly ingenious aboriginal mechanics as the Aztec masons. Figure forty-five shows this feature, as well as the shape of the stones in the shore wall, the sketch having been made from a point near the south-west bastion, where the wall is still about three feet high.

The outline of three bastions may yet be traced with some diffi-difficulty, but the north-west one has, during comparatively recent years, been used as a lime-kiln, and is consequently much disfigured.

In the diagram on Ducreux' map of the old Huron country, (Bressani's Relation Abrégée, Montreal, 1852, page 280), the bastions of the fort are not shown as of uniform size or shape, but this is probably the result of carelessness in drawing, The three now traceable resemble the south-west one on the plan, the space between the side walls heing in each case nine feet, the distance between the first and second angles of the bastion, eight feet, and from the second angle to the extremity, twenty feet.

---

*Chinking – the filling up of spaces between tree trunks that form the walls of log-houses.

According to the diagram thus mentioned the distance between the extreme outer angles of any two bastions was 123 feet, and this corresponds with the measurements made by myself. I was, however, unable to find any traces of an interior structure, perhaps because the ground was too soft to support one's weight near where the square structure is marked on the diagram, neither does much remain of fhe inward wall on the west side.

As long as a single stone remains to mark the position of this ruin, and even after every trace of the fort has vanished, the place and its story must possess more than ordinary interest to every Canadian. In the history of Canada, and especially in that of Ontario, the Hurons and the episode of the Huron mission, furnish us with material characteristic in no ordinary degree, of native life and Christian enthusiasm.

That the rock of Christian Island belongs to the Trenton formation seems clear enough from the nature of the fossils, and this is also evidenced from the traces of petroleum that find an outlet with numerous tiny streams of water along the shore. Half a mile or so north of the fort is a small lake without apparent outlet or inlet.

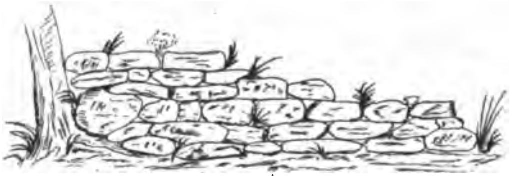


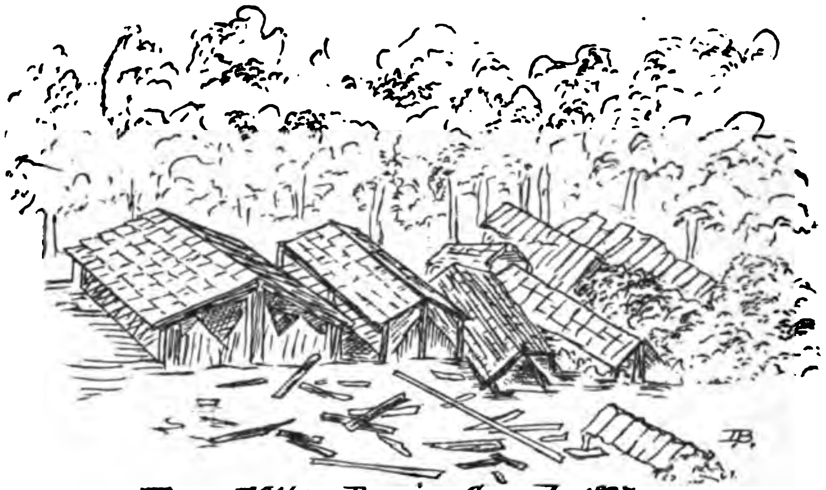
Fig. 45—The last standing wall of Ste. Marie.

PAGAN BURYING GROUND.

About half-a-mile west of what may be considered the village proper, on Christian Island, is the pagan village, consisting of a few scattered log houses, to the east of which is the pagan burying gronnd, Both places are so called because, as may be surmised, the pagan members of the band chose to reside thus, somewhat apart from their Christian fellows.

Judging by the extent of the village and the graveyard, the number of *professing* Pagans must have been small since the present Mississauga band came to the island, and at the present time every one on the reserve—some two hundred and fifty in all—is connected with either the Methodist or the Roman Catholic Church, the former being greatly in the majority. The last pagan, George King (Ah-wun-kwat, or Fog Cloud) died about two years ago, at an advanced age—between eighty-five and ninety, it is supposed.

The graves have been dug without much regard to order, and this is the more noticeable on account of the little wooden structures that have been erected over them, all of which, with two exceptions, are in a ruinous state. The covering consists of low, open frame work supporting a roof, the ridge of which is scarcely more than three feet from the ground. Beneath most of these there is apparently but one burial in each, but under the structure now in the best state of preservation, there are three, as may be seen from the sub-coverings over each grave. all the other graves have similar inferior coverings.



Pagan Village Burying Ground. 1897.

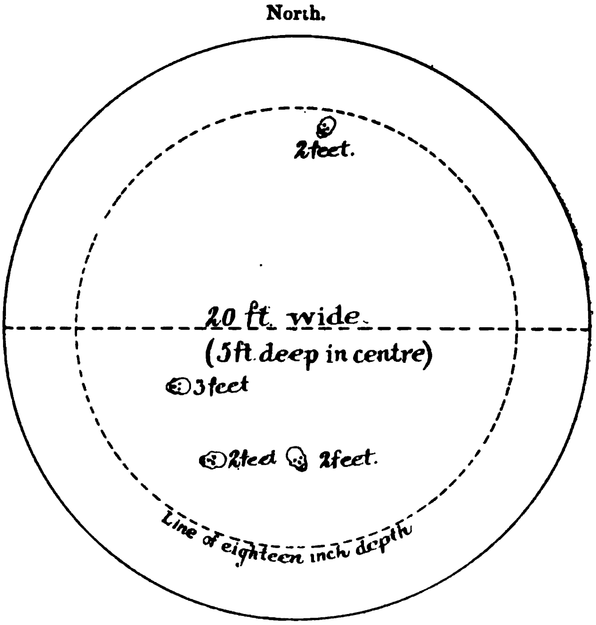
Fig 46.

The most recently made coverings are shingled, but in the older ones, the roofs are constructed of boards running up and down. Formerly, bark was used for this purpose, and is, indeed, still so employed in the more out-of-the-way parts of Algoma.

Only two grave coverings remain in anything like a good state of repair, all the rest have been utterly neglected, and as no attempt has been made to form an enclosure, cows and pigs roam over the ground "at their own sweet wills," making sad havoc. Even although it is *only* the pagan burying ground, its present condition is not at all creditable to the Christians.

AHOENDOÉ OSSUARY.

An irregular, sandy terrace runs parallel with the shore, and about five hundred or six hundred yards away. On the summit of this terrace, at a point nearly north of the Catholic church, but north-west of Ste. Marie Fort, Mr. Alfred McCue, the chief merchant and trader on the island led me to an ossuary, twenty feet in diameter. It is believed by the Indians on the island that this was the burial place of the French Jesuits who died during the brief occupation of the place by the Hurons in 1649-50. While it is not impossible that this communal grave was made by Hurons who resided on the island long before the time of the great trouble with their kinsmen, the Iroquois, it is more likely that here were buried many of those who died during the dreadful winter from famine and disease, for it is stated that of the six or eight thousand who here found on asylum, not fewer than three thousand died before spring. We know that as deaths occurred



Ahoendoé Ossuary.—Fig. 47.

"by scores daily," many bodies were buried in the earth, and in the snow by the priests and their men, and it may have been that, those corpses which had only the snow for a covering were collected in the spring, and some of them at least re-buried in this pit. As the ossuary had been partly opened some years ago,* the bones near the surface were quite fragmentary, but even at a depth of from four to five feet they were much decayed. This may have been owing to the sandy nature of the soil which admits air as well as water much more readily than loam or clay does. The degree of surface depression was such as to indicate the burial of the bones of four hundred or five hundred persons, but on account of the disturbance already referred to, no certainty could be attached to this sign. As the digging proceeded it was plain that those who had formerly opened this pit did not reach the bottom of it, except, perhaps, just about the middle, which was five feet below the general surface level. The whole excavation was originally basin-shaped as all ossuaries were, but in this case the bottom rose more sharply than usual from the centre to the sides, probably because the nature of the soil did not permit of going very deep round the margin of the hollow.

---

* As is so often the case, this pit was supposed to have been the repository of treasure hidden by the missionaries on their hasty retreat from Ahoendoé !

Within three feet of the edge the bottom was not more than eighteen inches deep, but no remains or the signs of any were found so near the outside level. Towards the south-west of the pit, two bodies were found lying on their right sides with the legs drawn up in front, but the bones were much decayed. Only four skulls in poor condition were here procured. The situation of those in the mound may be seen in the diagram. As has been intimated above, the bodies appear to have been buried in the flesh, thus affording us another reason for believing that the ossuary was formed in the spring of 1650, for, as is well known, the usual practice was to bury only the bones in such places, at intervals of some years after temporary burial elsewhere.

This Ahoendoé burial pit may not be the only one on the island, although inquiry among the Indians failed to elecit further information on this point, and the time at my disposal was too short to make an examination of the ground. It is highly probable, however, that others exist, dating from a period beyond the time of the Hurons brief but eventful occupation under the Jesuits in 1649-50.

I have to thank Mr. Collins, keeper of the lighthouse on Ahoendoé Point, also the Rev. and Mrs. E. T. Douglas, of Indian village for many kindnesses extended to me during the days I spent on the island. To Mr. Alfred McCue, too, I feel much indebted.

BRANTFORD TOWNSHIP.

On information received from Mr. H. C. Roberts, of Paris, I visited in July, with him and Mr. Jefferson of the same town, a farm in the township of Brantford, for the purpose of examining numerous large depressions in the soil, and which Mr. Roberts supposed to be ossuaries. A very cursory glance showed the hollows to be simply the result of sinkage, and where these were tested to the depth of two or three feet with the spade, evidence to this effect was rendered complete.

WHITEMAN'S CREEK.

A drive of a few miles farther brought us to the mouth of Whiteman's Creek, said to have been so-called from the fact that the land in the vicinity was owned, or occupied by a white man who had been reared among the Indians, and was known to them by this name.

It is told that Whiteman had a daughter (a half-breed) who drowned him, because she believed him to have hidden somewhere a large sum of money, her hope being that rather than lose his life he would divulge the hiding-place of his treasure, but this he did not do, probably for the very best of all possible reasons. The place is still pointed out beneath some trees, where his treasure is said to have lain.

Another story is that after this event, some Indians came along to Whiteman's old dwelling house which was then occupied by a man named Davidson, and that during their search for money they undermined the old chimney, which, in consequence, fell.

Whiteman's Creek here enters the Grand river from the southwest, flowing through some fifty or sixty acres of fine meadow land bearing a few straggling trees.

On a low plateau about ten feet above the level of the Grand river are traces of an old village site, and indeed, on the lower ground as well, it is plain that Indian occupation existed on both sides of the smaller stream.

MALAHIDE TOWNSHIP.

CIRCULAR RIDGE, NEAR MT. SALEM.

Mr. G. C. Peacock, of Mount Salem, Malahide Tp., in the County of Elgin, wrote that he surmised the existence of an artificial bank surrounding a swale within a short distance of his residence. Accompanied by Mr. Peacock and Mr. D. H. Price, of Aylmer, the place was visited during the summer, but the bank was found to be of purely natural formation. In some respects it was not unlike the other and much more extensive one surrounding Lake St. George (elsewhere referred to), and, as in that case, seemed equally difficult to account for as a result of natural action.

It was unnecessary to make any openings here, as several excavations, made either to procure sand, or to dig out woodchucks, were sufficient to show that no displacement had been effected since the material composing the bank was laid down.

EARTHWORK IN MALAHIDE.

Mr. Price and I afterwards examined very closely (but exteriorly only) a long and slightly curved mound, a bank, clearly the work of human hands, on the farm of Messrs. Baker and Pound, in the same township.

The annual report for 1891 contains a reference to this work, but on this occasion I viewed it with more experienced eyes. Its general direction is north-east and south-west, and following the curve it measures eighty-eight feet in length. In breadth, it is from twelve to fourteen feet across the base, and seldom rises more than two feet and a-half above the level of the field. Away to the east four hundred and thirty-two feet, is an ash-heap fifteen feet in diameter and fully four feet high.

This place is worthy of further and much closer examination, the whole field apparently having been a place of human resort in pre-historic days.

ORILLIA TOWNSHIP.

LAKE ST. GEORGE RIDGE.

Upwards of a year ago Mr. J. P. Secord, of Orillia, directed my attention to a bank or ridge almost surrounding a small body of water known as Lake St. George, some nine or ten miles north of Orillia, and not more than a mile from Lake Couchiching. On my return from Christian Island last autumn, I remained a short time at Orillia to examine this bank, and although I had to regret the inability of Mr. Secord to accompany me, I was fortunate in getting Mr. Hale, jun., of the *Packet*, as companion and assistant.

Lake St. George lies a little to the west of the Muskoka road, and occupies from 100 to 110 acres of lots 9 and 10, on the 13th concession of North Orillia. It has no apparent inlet or outlet, and is said to be from fifty to seventy-five feet in depth

Here, undoubtedly, we found a bank of very artificial looking formation, and we decided to follow it round the lake in a general way at first, and afterwards to make some examinations in detail, if such should be thought desirable. We thus found the ridge to vary in width from nine or ten to thirty-eight feet. At the eastern end, for a distance of a hundred and ninety-two feet there is no ridge whatever. South of this gap the slope of the ground is to the outside only. On the south-west side there is a portion that is not more than ten feet wide and two and a-half feet high, on the outside of which lie several granite boulders, and a little farther westwards there are numerous similar stones in the bank itself. A little west of south, the ridge widens to thirty feet, and rises to three and a-half, the outside being higher than the inside.

On the south there is an elevation about twelve feet high, between which and the ridge proper there is a trough about two hundred feet long and two and a-half feet deep, and at intervals along both elevations boulders appear. In walking over the whole of the bank, we found it to be within from twenty to fifty feet of the water, except at the west end, where the distance between the two must be nearly a hundred yards, the intervening space being mostly a bare bed of limestone. Near the middle of the ridge at this end we had several cuts made to ascertain the nature of the structure interiorly. One cut was made from the inside to the crown on a level with the base—a distance of seventeen feet horizontally, and five feet six inches deep. Near the lower part of this cut there were no stones of any account, but within twenty inches of the surface, near the crest of the ridge, a large slab of limestone was exposed, measuring six feet nine inches by five feet six inches, and five inches thick. Six inches below this lay another similar slab somewhat thicker, but the length and breadth of which we did not ascertain. Both stones were lying as horizontally as if they had been placed in a wall. Other cuts were made a little upwards of a hundred feet north, but while in no instance was there any sign of disturbance by human hands, it is equally true that there was an absence of that stratification which more or less regularly marks deposits of sand or gravel laid down in, or thrown up by means of, water. The bank here, and, indeed, more than half way round, consists chiefly of exceedingly fine, light, yellow sand.

It is unaccountable why such a bank should have been constructed by human hands to surround such a small body of water.

Notwithstanding a belief on the part of some that the strocture represents a huge serpent, I failed to observe a single feature that would confirm this view. I understand that many intelligent residents in the vicinity of the pond regard the ridge as the result of ice-action —of what are called " ice-shoves," and Mr. G. E. Laidlaw in an Orillia paper cited numerous instances known to him of similar elevations thus formed in the county of Victoria. My own want of knowledge regarding action of this kind does not warrant any opinion, but whatever may have been the agency by means of which this remarkable ridge was thrown up, I am now convinced that it had not an artificial origin.

Thanks are due to Mr. J. P. Secord, and to the Messrs. Hale, senior and junior, of the Orillia *Packet*, for many courtesies.

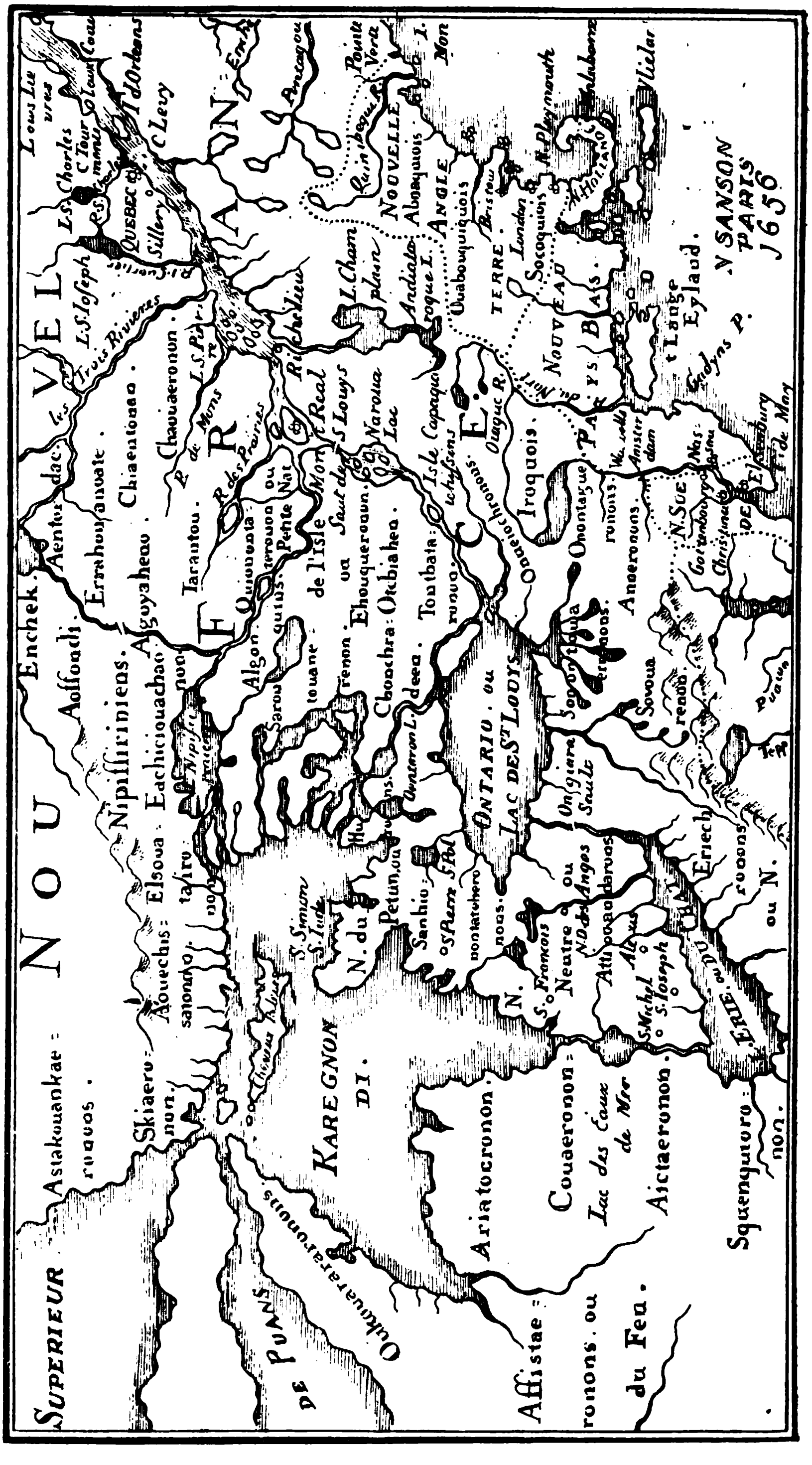

NOUVELLE FRANCE
SUPERIEUR
Astakouankae : rouuos .
Skiaero : non .
Aouechis : Elsoua . Eachiciouachao
Nipissiriniens .
Enchek .
Aoffoadi
Aentousdac
Errahouyanoate .
Agoyaheao .
Chiaentonao .
Chauuaeronon .
L.S. Ioseph
Trois Rivieres
QUEBEC
Sillery
L.S. Charles
C Tourmente
I. d'Orleans
C Levy
Lows Lievres
L. S. Pier
Tarantou .
R. des Prairies
MontReal
de l'Isle
Saut de S Louys
Ehouquerouan .
Chouchra : Ochiahea .
Toutbata
Narona Lac
Isle Capaquer
L. Champlain
Richelieu
Pentagou
Pointe Verte
NOUVELLE ANGLE TERRE
Abnaquiois
Andiatarogue L.
Ouabouquiois
Bristow
London
Plymouth
Socoquiois
NOUVEAU PAYS BAS
Iroquois
Onontague
Oniasontkeronons
Iroquois Agniehronons
Amsterdam
N. SUE
Christinehoff
Goteborg
N. SANSON PARIS 1656
Lange Eyland
ONTARIO . ou LAC DE ST LOUYS
Ouentaron L.
Sonontouaeronons
Onnontaeronons
Andastoeronons
Anaeronons .
Sovoua
S. Michel
S. Ioseph
S. Francois
Neutre ou N.D. des Anges
Atthouandarons
ERIE ou DU CHAT
Eriech
Squenquioronons
KAREGNONDI
N. du Petun ou Sanhio
S. Pierre S. Paul
S. Simon S. Iude
Huron
Ariatocronon .
Couaeronon :
Lac des Eaux de Mer
Aictaeronon .
Ouachiaraconons
Assistaeronons . ou du Feu .
DE PUANS

Fig 48.

OLD MAPS.

SANSON'S MAP OF CANADA.

Every student of Canadian history during the French period meets with frequent references to Sanson's map of "Le Canada, ou Nouvelle France," published at Paris in 1656. Original copies of this map are extremely rare, and reproductions are so far from being common, that it has been thought well to present here a copy of the portion which includes so much of Ontario as was connected with the "Mission to the Hurons," indeed, all that until recently, constituted this province.

As in the case of all early maps of any country, we have here a considerable mixture of knowledge and the want of knowledge, and, taking everything into account, the former is even more remarkable than the latter. Although somewhat distorted, the prominent features of the country are indicated.

The Ottawa route from Montreal to Lake Nipissing is marked with tolerable accuracy, except that by means of the Mattawan, or Mattawa, a clear channel is shown into the lake. It is noticeable also that although Allumette I. is indicated about half way between Nipissing and Montreal, Calumet Island is omitted. French River assumes the dimensions of a lake containing two large islands, and the whole eastern shore of the Georgian Bay was as puzzling to the old geographers as it is to-day to a sailing novice, with its maze of islands and inlets. The chief headlands and corresponding bays on the opposite shore seem to have been better understood, but not so the Lake Huron coast, and when we reach the southern end of the lake, we find that from this point to Lake Erie the outline is quite astray, yet not more so than would be the result should one of ourselves attempt to show the course after a canoe trip with no other guide than a compass. It will be noticed that the lakes also are disproportioned, especially Lake Huron, the western side of which must have been almost, if not quite, an unknown land.

The Tobacco Indian Country is represented as extending from what we now call the Bruce Peninisula to a line running west from Burlington Bay, if we accept as our authority, the arrangement of the letters "N. du Petun ou Sanhio=nontatehero=nons," while the Hurons in like manner occupy both sides of Lake Simcoe, or as it is here named "Oentaron" Lake, and afterwards "Toronto."

As it is yet undecided what the word *Toronto* means, and as it is claimed on very good authority that in all probability it is derived from the name of some Indian clan, it is interesting to observe that on this map are several names bearing quite as close a resemblance to *Toronto*, as "Ongiara" does to *Niagara*. Here, besides Oentaron, we have Sanhionontateheronons, for example, an exceedingly tempting word to mutilate and abbreviate in true English fashion ; east of Lake Ontario, we see Tonthataronon, and almost due north of it, beyond the Ottawa, Tarantou or Taranton, it is not clear which, even on the original map.

Perhaps the most interesting feature of Sanson's map to us is the attempt that has been made to mark the positions of the Jesuit mission towns. Numerous historical students and scholars have attempted to fix the exact spots occupied by these mission stations by the aid of this and other maps, as well as by severely critical study of the "Relations" and letters of the missionaries, but it would seem in some instances at least, quite impossible to say definitely where a village was, Perhaps on the completion of the work now engaged in by General Clark of Auburn, more satisfactory results will be reached than have been attained hitherto.

Mr. James H. Coyne in his paper "The Southwold Earthworks and the country of the Neutrals," which appeared in the Archæological Report for 1892 93, page 25. refers somewhat fully to this map, stating that the compiler had no doubt procured his information from one made by Chaumonot, but "which is not extant." Elsewhere on the same page, Mr. Coyne gives it as his opinion that Sanson's is "probably the first printed map in which Lake Erie is shown."

Before closing this notice of the map, it may be observed that the Cheveux Relevés are marked as occupying Manitoulin Island, and as we know that Champlain paid a visit to a branch of these people southwest of the Tobacco Nation Country, their range was evidently one of considerable extent, and tends to lend color to what is assumed in this report under the heading "Victoria County," that they also occupied territory north and east of the Hurons.

For much that is of interest relating to the map, readers are referred to Mr. Coyne's paper already mentioned.

Although the next map (fig. 49) is probably more recent than Sanson's by at least a hundred years, there can be no claim made for it in point of greater accuracy. Still, an examination of it may prove interesting. The "Huron Country" is not here any longer, but only "The Countrys conquered by the Five Nations." The St. Lawrence between Montreal and Kingston is the "Cadaracui River," and Kingston itself is yet only "Fort Cadaracui."

In these days of rapid transit by steam and electricity we may well be struck by the intimation that a certain half-dozen dots between the Hudson R. and the southern extremity of Lake Champlain mark the "Carrying Place to Canada," and it will be observed also that according to this map-maker the only "Part of Canada" worthy of notice was around Quebec. We find also another "Car. Place" (Carrying Place) at "Jagara," or, as we would say, Niagara.

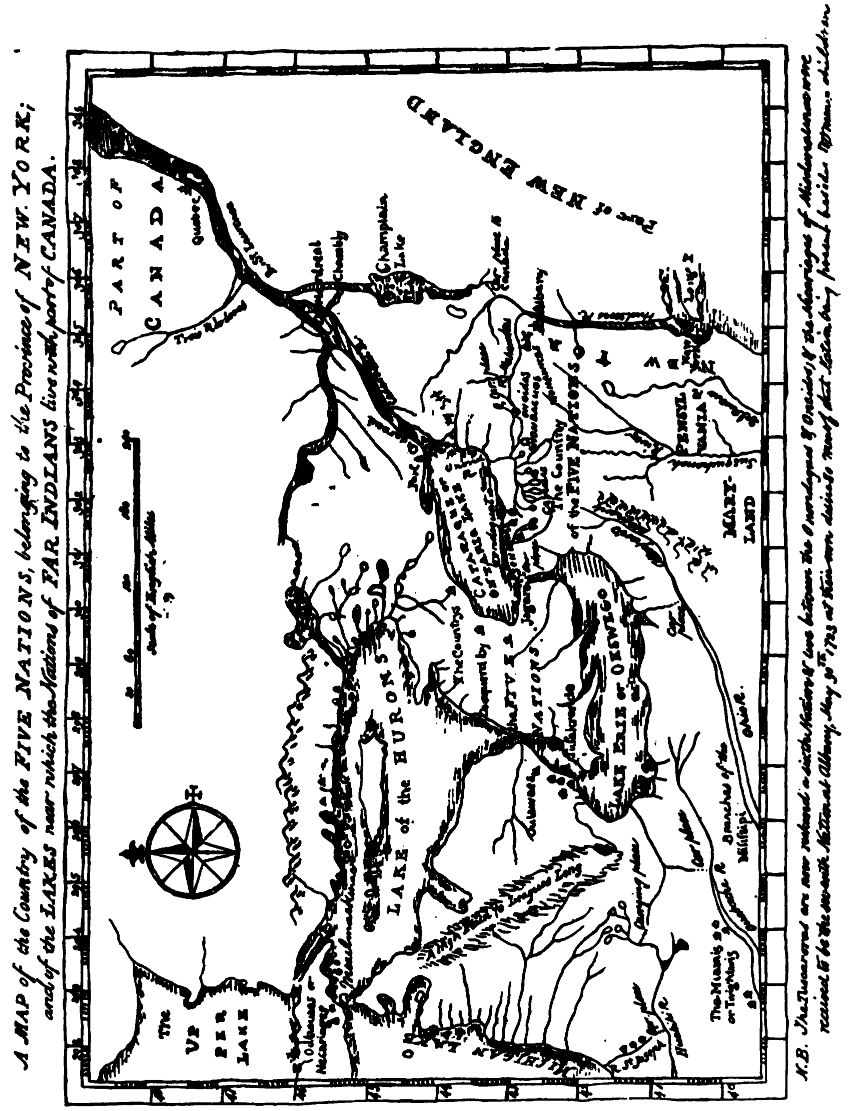

A MAP of the Country of the FIVE NATIONS, belonging to the Province of NEW. YORK; and of the LAKES near which the Nations of FAR INDIANS live with part of CANADA.
PART OF CANADA
Quebec
R. St Lawrence
Montreal
Chambly
Champlain Lake
Car. place to Canada
Part of NEW ENGLAND
Albany
NEW YORK
New York
Long I
PENSYL VANIA
MARY-LAND
CATARAQUE or ONTARIO LAKE
The Country of the FIVE NATIONS
Oneidas
Onondagues
Jagara Car. place
The Country Conquered by the FIVE NATIONS
LAKE ERIE or OKSWEGO
LAKE of the HURONS
Misilimakinac
Odjibouses or Necariages
The UPPER LAKE
LAKE MICHIGAN
Carrying place
Car. place
Branches of the Misisipi
Ohio R.
The Miamis or Twightwis
Scale of English Miles
N.B. The Tuscaroras are now reckoned a sixth Nation & live between the Onondagoes & Oneidos; & the Meahriages of Misilimakinac were received to be the seventh Nation at Albany, May 30th, 1723 at their own desire, 80 men of that Nation being present besides women & children

Fig. 49.

NORTH VICTORIA.

Mr. Geo. E. Laidlaw's unremitting efforts in Victoria County, like Dr. T. W. Beeman's in Lanark, have done much to open our eyes relative to the extent of aboriginal occupation, and the comparative density of the population at some time, probably not long prior to the discovery of Canada, with not a little to show that long before this period the land had been in possession of a people similar to the more recent occupants, but not identical with them.

If we accept ossuary burial as a characteristic custom of the Hurons, then neither the former people nor those whom Champlain met with when passing through this district in 1615. were of Huron-Iroquois origin, for not a trace of such form of burial has been found in the district in question. In fact, scarcely anything has been discovered in the shape of a grave of any kind. This, also, has been Dr. Beeman's experience further east.

Diverse as are the patterns of pipes in a given locality, there is something in them—something, which, to employ an art-criticism term, may be called their 'feeling' that enables us to distinguish them as the work of makers, more or less remote from other makers, whose workmanship is of different 'tone.' But in this quality there is no perceptible difference between the pipe-art of those who occupied North Victoria, and the Hurons who ranged from Toronto to Penetanguishene. In both cases there is a scarcity of slate "ceremonial" or "banner-stones," "bird-amulets," and even (though less so) of the plain "gorgets" or "tablets" with one or more holes through each.

On the other hand, clay and stone discs from an inch to two inches in diameter seem to be more abundant north of Balsam Lake than anywhere else, but this may be owing to the shorter period during which this portion of Victoria has been under cultivation, and the assiduity displayed by Mr. Laidlaw in bringing all such objects together, and the same remark holds good with respect to fragments of pottery, except that Bexley and neighboring townships in Victoria county have yielded pieces bearing ornamental designs quite unlike any found elsewhere.

What would seem most probable is that the occupants of the territory in question were of the Cheveux Relevés three hundred of whom were first seen by Champlain in the autumn of 1615, near the mouth of the French River. Parkman writes of these people in a foot-note, page 365, "Pioneers of France in the New World," that they "belonged to a numerous Algonquin tribe who occupied a district west and southwest of the Nottawasaga Bay of Lake Huron, within the modern counties of Bruce and Grey. * * * The Ottawas, a kindred people were afterwards * * * called Cheveux Relevés by the French."

Champlain visited this clan or band in the winter of 1615-16, and "commends them for neatness and ingenuity, no less than he condemns them for the nullity of their summer attire,"* referring in his condemnation to what he had observed the previous autumn, when he said "not one of our courtiers takes so much trouble in dressing his hair * * * but they do not wear any clothing."

That the same people occupied much of the country east and north, as well as west of the Hurons is not unlikely. Their northern limit may even have touched the southern one of the "Sorcerers" or Nipissings. At any rate, the character he gives the Cheveux Relevés for "neatness and ingenuity," will apply in many respects to those who lived in North Victoria.

We know quite well that the Hurons were in frequent alliance with neighboring Algonkin peoples for offensive and defensive purposes against the Iroquois, and even during peace-times there must have been a considerable amount of intercourse between those of different stocks, and it is quite natural, therefore, to infer the operation of mutual influence in more ways than one. In this way we may account for certain similarities as well as dissimilarities observable in the handicraft and customs of the Hurons and their Algonkin neighbors.

Mr. Laidlaw's paper contains much that is confirmatory of this view. Some of the most ingeniously made specimens found by him will be found illustrated and described elsewhere.

BALSAM LAKE AND VICINITY.

BY GEORGE E. LAIDLAW.

During this present season—1897—I examined this territory more closely than ever before, with a corresponding increase of results.

I find that the spring is the best time of the year for examining sites, etc., especially on ground that has been ploughed in the fall, as the action of the frost, snow and weather during the winter, levels all the plough ridges and other irregularities of the surface, and leaves even minute objects exposed to the view, before being disturbed by the spring operations.

---

*Pioneers of France in the New World, p. 384.

Besides searching for relics and examining the sites referred to in previous reports, and those that were brought to my notice for the first time this year, a portion of time was devoted to plotting some of the sites, and determining by means of pacing, the dimensions and relative positions of the ash beds to one another, as is shown by the accompanying plans, and by others that do not here appear.

'Ash beds' in this article signify those that were created by the floors of dwellings or habitations and are distinguished by the discoloration of the soil; while 'ash heaps,' or 'ash pits,' are those refuse-heaps which occur generally on the outskirts of the village, and which were created by dumping the refuse of the village.

It is interesting to note that though the majority of the ash beds are circular or slightly oblong in form, there are occasional ones of a length three, four or many times their breadth, showing the habitation to have been of that class known as "long houses," much affected by the Huron-Iroquois nations. In these sites the main dwelling seems to have been in the centre with an irregular circle or group of others around it, and was probably the pioneer dwelling of the place, the chief's residence, or council house. These latter sites Mr. A. F. Hunter of Barrie designates as Algonkin, using for a modern illustration the disposition of the Algonkin camps in the North West. The ash beds, which show that the habitations were "long houses," he places as Huron, though only one pure example occurs in the vicinity. But what about the sites in which both sorts occur? Were these villages peopled by both Algonkins and Hurons? Or does it show that the "long houses" were evolved from several of the other sort joined together for better accommodation and defence? It is noticeable in several of these long beds that they are accentuated at several points, as if the foregoing did occur. Admitting the preceding, one can readily understand the origin of the custom of relegation to distinct parts of the "long house" of the families inhabiting it, as in vogue amongst the Huron-Iroquois tribes. Some of the beds are very large and very distinct, as if occupation lasted a long time, whilst immediate neighboring ones are the reverse. Some beds show that additions had been made to the original dwellings.

Scattered here and there amongst the main beds are very small ones (not marked on plans) which may have been outside places for cooking and for baking pottery; these are generally from four to six feet in diameter, and contain no relics. The main beds, especially the centre ones, contain the most relics, showing that they were occupied longest and accumulated more refuse material. The refuse heaps seldom contain whole or perfect specimens, but abound in large quantities of broken pottery, bones, etc., from which one concludes that the Indians had no systematic house cleanings, but as the ashes in the fireplace bulked up so as to be in the way, they were removed to the dump-heap, whilst the remainder of the debris-floor was left intact.

Brèbœuf in his Relation of 1634-36, gives the dimensions of Huron houses from "two to forty brasses (fathoms) in length, and about four brasses in height and width; that they were made of bark, branches and slabs of wood, were very inflammable, often whole villages being swept away." This latter fact may account for the number of sites in one district. He also further states "that the houses had no windows, chimneys, garrets nor chambers," and though mentioning corn bins does not place them, which, according to Cartier, were in the tops of the Hochelagan houses. The absence of granaries in the Huron houses would account for the câche pits around the village.

In any case I failed to discern or to learn about any palisades, though some of the villages may have been palisaded in the same fashion as Hochelaga. Compactness of a village induces one to believe that it was palisaded, though no traces of palisades remain. Straggling villages occupied too much space, the palisading of which would involve an immense amount of labor; the risk of fire also acted as a deterrent. One of the reasons that the sites in North Victoria, North Ontario and South Simcoe districts were small and not palisaded, may be that they existed before the necessity of concentration and defence, at advantageous points, against their Iroquois foe; hence the large fortified towns of North Simcoe.

The sites of this locality are not on the tops of the highest hills, but are generally on lower elevations; in some cases very high hills being in the immediate neighborhood, similar to localities chosen by the North West Indians of the present day, which afforded seclusion, safety from surprise, and not being immediately on the main trails or water courses, high hills in the vicinity being used for lookouts, or for signalling purposes. In accounting for the absence of sites in the granite regions, might not this theory be advanced, that as the surface of the ground consists of steep continuous granite ridges and hills, with narrow valleys between them, and that the valleys are generally dense swamps and beavermeadows, very wet for the greater part of the year, and very little if any land suitable for the growth of such cereals as the aborigines cultivated; that the choice for sites would naturally fall upon the dry elevations of the limestone region? The granite region being resorted to for hunting and fishing.

Among the sites examined the following new ones may be described, the first being one on J. Newby's farm, lot 2, concession 11, Mara township, N. Ontario. This site is on the east side of a small creek running into the west side of Mud Lake, and is distant one mile north of Upper Mud Lake and one mile west of Lower Mud Lake, whence there is direct canoe route to the Huron country. The village consists of two ash beds, thirty-nine by ten paces and forty by eight paces respectively, distant sixty-seven paces from each other, and having a north-westerly direction ; ground suitable for aboriginal cultivation. The ground being covered with crops, only a slight examination could be made of the ash beds, but they yielded clay pipes of the cornet type, unio shells, celts, bone awls, pottery fragments, etc. No relics showing contact with white men have been found here. This site is clearly Huron.

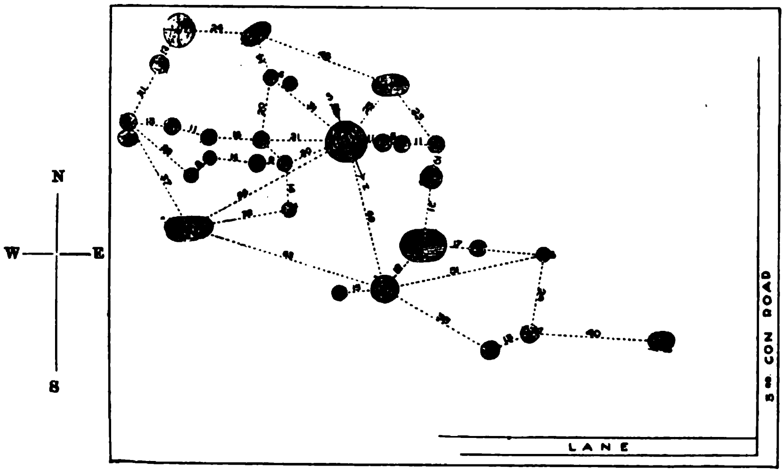


Fig. 50.—Village Site, Lot 23, Con. 3, Eldon.

The next site to be visited was on W. J. Stanley's, lot twenty-three, concession three, Eldon township, north Victoria. This is a very compact site situated on the north side, and at the foot of a high hill, known as Logan's hill, with Butternut Creek to the north some rods away. A large spring exists some few yards to the east. This site consists of several main beds, a large central one and numerous small ones, all very distinct, some being remarkably pronounced and yielding great quantities of relics of which I succeeded in obtaining, bone awls, needles and beads, clay pipes of various forms, stone beads and discs, pottery fragments and pottery discs, carbonized corn, worked unio shells, celts, and two varieties of perforated marine shells, one a cowrie, the other a dog whelk. What impressed me most was the abundance of water-worn pebbles in the ash beds, these ranged in size from that of a plum to that of a goose egg showing few marks of wear or use; they may have been used as a missle, or in that form of a weapon known in the North-west as a "coup stick." Of the ash beds, some would give one the impression that additions had been made to the original dwellings, while others, though in rows and quite near each other are distinctly separate, and being round or oval grouped round a central bed would be Algonkin. Absence of flints from the site leads one to suppose that the village was of the stationary or agricultural class, especially as the locality is pre-eminently suitable for aboriginal cultivation. Butternut trees and wild cotton still abound. No relics showing contact with white-men are found and no graves are known to exist.

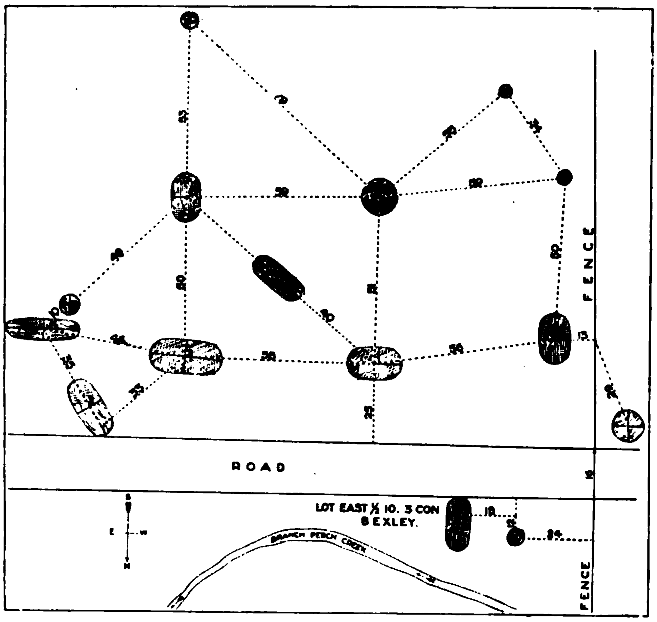
Another new site is situated on the east side of Big Mud Turtle Lake, one of a chain of lakes now being utilized by the Trent Canal system, on lots 57 and 56, Front Range, Somerville township, Mr. G. Rumney being owner. This is a small site, one-half mile from the lake, and is on an elevation, with a higher elevation to south-east and a small valley to south-west. Across this valley, one quarter of a mile distant, on J. Wallace's farm, lot 60, Front Range, Somerville, are also evidences of aboriginal occupation, which may be an instance of an isolated camp. A large spring exists in the valley between the two localities. There was a primeval growth of large pine timber on these two sites some twenty-five or thirty years ago.

Amongst the relics obtained were celts, plates of mica, pottery, pipes, carbonized corn, beans and plum-pits; beavers' teeth ground for tools, as small chisels; a large clay bead, worked clam shells, a part of a clay pipe representing a fish or serpent. The most of these relics were from an ash pit twenty feet by two feet deep, which had never been disturbed. No "white-man" relics were found, nor were graves known to exist. Five pits formerly existed on slope to north of south site.

On Mr. Joseph Ead's farm, lot 24, con. 2, Somerville township was probably a later Algonkin site, for when clearing the place thirty-five years ago, and at intervals since, Mr. Eads has found iron knives, iron pipe tomahawks with stems, and quantities of pottery and flints. He stated that there were eighteen graves on the crest of the hill, and when he opened one, found the skeleton in a sitting position facing south, with its skull above ground. Mr. Eads thought that these were criminals and placed the age of the graves at 130 years. Near the graves was a cellar seven feet deep and three feet in diameter, lined with birch bark. This cellar, according to Mr. Eads, was for keeping fish in. This site is one mile east of Balsam Lake, half a mile west of Goose Lake, and two miles south of Four Mile Lake.

On Mr. J. Moore's place, lots 19 and 20, Gull River Range, Bexley township, are also evidences of aboriginal occupation, namely, several ash beds of the ordinary type, situate on the edge of a high plateau facing to the southeast. These are about a quarter of a mile distant from the site at D. Smith's (see Report of '96). To the north of the ash beds is the highest hill in the vicinity, on which iron relics have been found. At a distance of 100 yards south of ash beds and near the edge of plateau, is a large pit, which at present is impossible to state whether it is of natural or artificial origin, as the edges have been plowed down and the bottom filled up. Present dimensions: depth, 10 feet; north diameter, 53 feet; south, 43 feet. A companion pit exists to the west of this one at a distance of about 20 rods; of the present dimensions, depth fifteen feet, circumference of 188 feet was formerly much larger with probably a diameter of twenty feet in excess of present one. Mr. R. J. LeRoy, Reeve of Bexley, remembers these pits were much larger in recent years. The latter pit seemed to be conical in shape and held about eighteen inches of water in June last. The late Joseph Kenice, a very intelligent Indian from the Rama Reserve stated that these pits were dug by the Mohawks, (Iroquois) to fight out of during a battle with his tribe, now on the Rama Reserve (Mississaugas). Kenice also stated that the groups of little pits observed on several sites were used for hanging meat in the summer time.

There is a group of similar pits, four in number on John's Chrysler's farm, lot eighteen, concession four, Carden township, on east side of Lower Mud Lake and at a distance of about thirty rods from shore, near the edge of a high plateau; the north pit being some thirty-two paces distant from the others, three of which are joined together; a line through the centres of pits has a northerly direction; the north pit is ten paces in diameter and five deep, saucer-shaped and may be an ossuary. The other pits are in a row separated from each other by a narrow ridge of earth which does not reach to the level of the surrounding surface. Total length of the three pits forty-two paces, twelve paces wide, and from ten to twelve feet deep. Individual dimensions, north pit fourteen by twelve paces, centre pit fifteen by twelve and south pit ten by twelve. They are conical shaped and the centre one is the deepest. These pits are in their original condition with the exception of some rubbish thrown in. It is thought by some that these large pits were perhaps of natural origin but were used by the Indians after a slight improvement for their ceremonies; they are thus called "sorcery pits," and it is said they occur at or near a great many sites in Simcoe county. The pits are not modern, as I first thought that they might have been connected with some traders' post or H. B. C. Fort, but on enquiry neither of these proved to have been erected in those particular localities. To the immediate north of pits are about twenty acres of second growth timber called the "Indian clearing," at the lake shore, is the "Indian landing," while the pits are called the "Indian caves." The locality is frequented by Indians up to present times. It seems strange that if the pits are caused by subsidence or percolation that the line of pits should be at right angles, and at the top of the drainage slope, nearest known localities of materials used by the aborigines of this section.



Village Site, E½ Lot 9, Con. 8, Bexley.

During the mining boom which occurred here this summer, soapstone was discovered in a prominent ledge of rock jutting out in a valley on Mr. Isaac Spring's farm, lot one, concession A, Somerville, east of Gull River, and also on Mr. Grier's farm two miles north of Spring's. The Indians probably knocked off masses of this material as it was needed, which was a more convenient method than quarrying.

Mr. LeRoy and myself failed after a very close scrutiny to discover any traces of ancient quarrying.

Several nuggets of native copper have also been found, the specimen forwarded coming from Mr. Allan Cameron's farm, lot twenty, concession five, Lutterworth township. It was picked up on surface of rock and may be "drift," but Mr. R. W. Leonard, C. E. a mining expert states that both pure native copper and the ore exist in that neighborhood.

Diorite occurs near Sudbury, and probably more to the south of that district.

Graphite occurs in Glamorgan township. A ledge or out-cropping of silicious rock (chalcedony) occurs in Carden township, south-east of Mud Lake. It extends for a distance of 100 yards and is plainly visible.

EMBANKMENTS.

A long serpentine embankment to the west of Cranberry Lake, Carden township, about 200 yards long, twelve feet wide, and two or three feet high, proved, on examination, to be composed of boulders and gravel, resulting from glacial action.

The embankment mentioned in report of 1896, on Long Point, is no doubt, caused by the ice shove, as its material is the same as the shore material. It occurs in several lengths for a total distance of half a mile or so, and is quite near the water's edge, except the south portion. The height in several places is increased by the shore sand being deposited on it by the wind. Old beaver dams are sometimes mistaken for Indian mounds.

SPECIMENS PROCURED.

Amongst the relics obtained this season are some very interesting ones from the following localities, viz.: A three-faced clay pipe-head, and a double-faced one, both pipes human-faced; another double-faced pipe—one face being human, the other a coon; some faces from clay pipes—one being outlined by dots and having a row of dots for the mouth, an unusual type of marking; perforated flat needles of bone; bear's tusk, ground to an edge for cutting; split beaver's teeth, ground so as to have chisel and knife edges; a large bone awl with a tally, and a groove cut longitudinally down it; a perforated circular bone from a fish's head; perforated wolf's teeth; horn pottery marker; a toy, or miniature celt 2¼ by 1 by $^3/_{16}$ inches; a fragmentary clay head showing the mouth defined by a groove around the lips; and some soapstone beads in process of manufacture. All these coming from site on lot 5, con. 5, Bexley.

A large Huronian slate celt, of light-green color showing the three methods of making, viz., flaking, pecking and rubbing; a bone harpoon with eight slight notches on one side, length of harpoon 6¼ inches; a horn pottery marker, or maybe a "flaker" for flaking flints. Some pottery with a net pattern made with a notched stick. Locality Bolsover.

A soapstone pipe shaped like a cork 1¾ in long; several horn tools which may be flakers, but are suitable for marking pottery with indents; a tally bone with three distinct tallies, and a hole for suspension; several small stone beads; horn arrowhead with hole for inserting the shaft; bear's tusk ground for a cutting tool; three miniature celts, probably toys for children, or maybe emblems to be used for burial purposes, the largest 2 1/5 by ⅞ by ⅜ inches, sides not worked; the next is 1 13/16 by 9/16 by 3/16 in., very symmetrical and worked all over; the third is perhaps made from a splinter from a large celt trimmed into shape and is 1½ by ¾ by ¼ inches; and some slender spiral sea shells; from site on lot 45, S. P. R. Eldon.

Plates of mica; perforated flat bone needles, from site on lots 56 and 58 Front Range, Somerville.

White soapstone bead, of excellent workmanship, and perforated clam shells, sea shells, and wolves' teeth from site on lot 23, con. 3, Eldon.

Rubbing stone of Nottawasaga sandstone oblong shaped, 4½ by 2 by ⅞ inches. Mitchell's Lake, Eldon.

Copper spear-head found on lot 9, con. 2, Bexley—on loan—total length 6¼ by 1⅜ broad and 3/16 inches thick, socket 2 inches long. Has a ridge down the back of blade giving a cross section of a flat triangular shape. The socket is of triangular cross section with a transverse ridge near the blade to prevent the shaft slipping on to the blade. Perhaps green hide thongs were used in connection with the socket for holding the blade firmly to the shaft, these thongs when drying would contract and firmly bind what they were wrapped about.

A mottled grey soapstone plummet from lot 6, con. 1, Bexley, shaped like a truncated cone, perforated longitudinally with perforation inclining to one side. Size 1 3/16 long, 13/16 diam. of top, 1 inch diam. of bottom; highly polished, altogether a very neat specimen of aboriginal workmanship.

A miniature double-bitted chisel, size 3⅛ inches long, by 7/16 wide and thick, bit ¼ inch wide, worked all over, and a horn "flaker"; site at lot 9, con. 3, Bexley.

A bird or bar amulet of striped Huronian slate, green in color, 3⅜ inches long, $^{7}/_{16}$ thick, and 1¼ in width at the widest part—is the first on record from this locality. Where it came from is not known, as it was originally in the possession of D. McRae, of Thorah township, now deceased.

A soapstone pebble, highly polished, with a series of deep grooves cut into it; Little Mud Turtle Lake.

Besides the above articles there were the ordinary specimens of bone bangles, awls, beads, perforated dog-whelks, carbonized corn, celts pipes, pottery, and stone discs, and a few flints, recovered from the various village sites.

Amongst the relics showing contact with Europeans are: a ghost-arrow of copper, a long slender spear-head, a combination adze and gouge, for hollowing out canoes and troughs; a heavy gouge for tapping maples, and a steel made to fit over the knuckles, for striking fire—all surface finds.

The small bone bangles and other ornaments used in adorning the dress or person, were called "matachias" by the Algonkins, and were sometimes stained. See Jesuit Relations, vol. 8.

Credit must be given to the following persons for donations, and interest taken in the work:

Dr. Ross Kirkfield, fragments of pottery, etc.

A. Morrison, Beaverton, copper "ghost-arrow."

Allan Cameron, Lutterworth township, nugget of native copper.

G. McKague, Bexley P.O., celts, clay pipes, stems showing extreme sizes, stone discs, and rubbing-stones.

James McGirr, Bolsover, flints, pottery, bone harpoon, two celts, bone awl, fire-steel, pottery-marker or horn "flaker," clay pipes.

J. Moore, Coboconk, celts and combination iron adze-gouge.

S. Harbaugh, Corson's Siding, two double-faced pipes, and bone bangles.

William Irwin, Bexley township, bone awls, stone and pottery discs, clay pipes, perforated marine shells, soapstone beads, and rubbing-stones.

M. Sayers, Bexley P.O., copper spear-head (on loan.)

S. Truman, Kirkfield, steel spear-head, flint knife, flint awl, carbonized corn and plum-pits, hematite, pottery disc, fragments of sheet-brass, and fragment of stone ring.

Headly Fair, Cambray, celts, and flint arrow-head.

Mrs. R. Campbell, Kirkfield, perforated marine shells, bone implements, stone and clay discs.

D. McRae, Gamebridge, combination bird and bar amulet.

G. Rumney, Somerville township, celts, clay pipes, bone implements and ornaments, and pottery fragments.

R. LeRoy, Reeve of Bexley, celts, clay pipes, and bone implements.

J. Bowms, Coboconk, polished soapstone pebble with deep grooves.

J. Wallace, Somerville township, bone beads, awls, celts, carbonized corn, pottery fragments, worked clam-shells, perforated marine shells, eyed bone needles, etc., from ash heap.

D. Smith, Coboconk, rubbing-stone and discs.

R. H. Pearce, Raven Lake, Bexley, polished pebble, flint scraper, and small celt.

W. McNerney, Victoria Road, celt and plummet.

Mrs. R. J. Sims, Peterboro', rubbing-stone of Nottawasaga sandstone.

John Shields, Victoria Road P.O, clay pipe and awl.

Jos. Eades, Baddow P.O., steel knife flint, worked fossil.

S. Kershaw, lot 5, con. 5, Bexley, worked spikes of deer-horn, miniature clay pipe, disc with stone and bone, bone awls, etc.

Since completing the above I have located three more village sites, the first on Mr. Frank Reid's place, lot 25, concession 3, Digby township, one on Mr. Wm. Campbell's, east half 1, concession 8, Laxton township, and the third on Mr. Donald Fraser's, lot 21, concession 9, Eldon. The site at Reid's is on the face of a hill facing north-east, two miles from Head Lake, on the south side of Head River, flowing in a westerly direction. The river to the east of the site, about twenty rods, flows north and then after describing a big bend flows south again, passing near the west side of the site. Freestone formation; soil suitable for aboriginal cultivation. On north side of river the high granite hills commence. The usual traces of aboriginal occupation are plainly visible though cultivated for many years.

As in the above case the next site has been under cultivation for many years, and but few traces now remain beyond the blackened patches of ground and pottery fragments. This site is situated on the south side of Deer Lake, a small beautiful lake of probably one and one-half miles in length and three-quarters of a mile in breadth, and having a number of islands. The flat is about six or eight feet above water at the front and gradually rises for a distance of thirty rods or so when it meets a precipitous ledge of limestone twenty-five or thirty feet in height, making an ideal place for a site. In early years both Messers. Reid and Campbell used to pick up lots of relics, but these were dispersed. A medium sized symmetrical adze, having two broad shallow notches for fastening purposes, and a very sharp edge, was given by Mr. Campbell. Indians have frequented this latter locality down to recent years.

On W. G. Peel's place, north part lot 11, concession 2, Bexley, is either a small village or an isolated camp, as pottery fragments, pieces of pipes and flint chips can be picked up on the crest of a small hill or tongue of land running into a swamp. In opening some ash heaps lately, the following relics worth special mention were obtained:—

From lot 1, N. P. R., Bexley, a beautifully pointed bone awl 6¼ inches long; a miniature pot (toy ?) 1⅜ inches high, with a diameter of 1 inch, slightly ornamented in a roughish way, it just fits over the end of the finger like a huge thimble, this was probably the way it was made; a long slender flat bone needle or bodkin, 4¼ inches long, ¼ inch wide, 1-16 inch thick, having a circular drilled eye 1¾ inches from the point, other needles show slots ground into them from each side forming a long eye; a bone skin dresser 6½ inches long and 1 inch wide at cutting edge, made from a leg bone by being diagonally ground down, shows marks of much use and of fire, is polished; a harpoon head of horn, 5¼ inches long, ¾ inch wide and 3-16 inch thick, has two deep barbs on one side, and a hole immediately in rear of second barb, the butt being wedge shaped with corners rounded. Has very much the appearance of Eskimo work, resembling those harpoons which are made detachable from the shaft, and are connected with a float, this one may have been used for beaver or large fish; discs of every size and every stage of manufacture both of stone and pottery; hammer stones; marine shells; carbonized corn beans, plum-pits, acorns, etc.; clay pipes and stems, the latter showing that the stem hole was made in three ways, the first by a straw being moulded in and then drawn out before burning, the next by a twisted cord of fibres, and the third by a tiny bundle of some material made like a miniature fascine, the two latter being burnt in the stem, leaving their imprints; and a silurian fossil (which is not an uncommon occurrence), and was perhaps regarded as "big medicine."

From lot 5, concession 5, Bexley, we get hammer stones, both circular hand hammers and degraded celts; carbonized corn, beans, plum-pits, etc.; turtle egg shells; pipes; bone awls; eyed needles; and a couple of bone daggers, the largest one 10½ inches long, 1 inch wide, and of a triangular cross section tapering gradually to a point, scraped and polished all over, and ornamented with a simple design of inscribed straight lines, arranged in system of four groups of horizontals, separated, begun and ended, by vertical pairs inclining slightly and alternately in opposite directions, the first two groups contain five horizontals and the second two four horizontals, which together with the five pairs make a total of twenty-eight lines. The lines run from ¾ to 1½ inches long and about ⅛ inch wide, and the whole pattern, not unlike some pottery markings, covers a space of about 5½ inches in length. The second dagger is much smaller and not ornamented There is also a portion of a deer horn with one spike which is artificially pointed.

Other relics lately obtained :

From Mr. Chas. Youill, Thorah township, a large slab of Huronian slate of a green color, tinged with red, and having large white veins. This was one of three and shows flaking, pecking and rubbing, is evidently unfinished. Dimensions, 8 inches long, 4½ inches wide at narrow edge, 6 1-8 inches at other, ½ inch thick. A fine beautifully worked slender stone tomahawk from Thos. McNish, Long Point, Fenelon township, size 7¼ inches long, 1 1-16 inches wide, ¾ inch thick has a perfect cutting edge, and the poll is ground to narrow chisel edge which is slightly abrased, the four sides are all smoothed down the top being rounded, while its opposite side is flat, as if for the purpose of driving wedges in to tighten the handle. It is altogether a remarkably fine weapon for rapid striking.

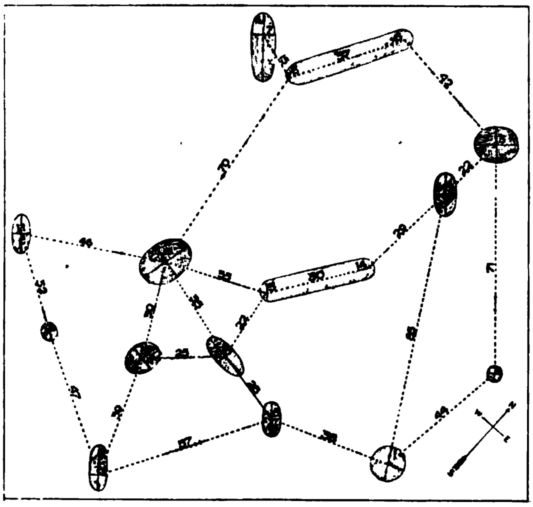


Fig. 52.—Village Site, Lot 5, Con. 5, Bexley.

The remains left in the ash heaps would lead one to judge that game being very scarce the population was large and lived to a great extent on the proceeds of agriculture helped out with fish. The relics that are found in them may be classed as household utensils rather than as implements of war or chase, so few of the latter occurring. The preponderance of implements are made of bone, and horn, there is a total absence of chipped flint implements though nodules and flakes occur, also stone pipes are rare, while stone celts are found in vicinity they rarely occur in the heaps. The remains of their food are abundant, such as bones of animals, fishes, birds and turtles, fish scales, turtles' egg shells, carbonized corn, acorns, plum-pits, beans, and what looks like small edible roots.

The site on Mr. Donald Fraser's, lot 21, concession 9, Eldon, lies on the top of a steepish hill which faces north, and has a swamp at the foot. The usual relics found on village sites were picked up many years ago, and among them a copper knife. Further to the west on same lot, iron tomahawks have been plowed up, and a coin of Philip V. of Spain, a two *real* piece bearing the date of 1723. That this was worn as a pendant is obvious from the broken suspension hole in the rim and one side of the coin being worn down.

List and Locality of Village Sites to Date.

No. 1. Rummerfield Hill, lot 1, North Portage Road, Bexley township, North Victoria.
" 2. Logan's Hill, lot 22, concession 3, Eldon township, north Victoria.
" 3. Corbett's Hill, lot 5, concession 5, Bexley township, north Victoria.
" 4. Heaslip's Point, lot 2, Northwest Bay, Bexley township, north Victoria.
" 5. McKague's, lot 9, concession 3, Bexley township, north Victoria.
" 6. Smith's, lot 18, Gull River Range, Bexley township, north Victoria.
" 7. Benson's, lot west ½ 5 and 6, concession 2, Bexley township, north Victoria.
" 8. Head of portage, Balsam lake, block E, Bexley township, north Victoria.
" 9. Truman's, lot 22, concession 8, Eldon township, north Victoria.
" 10. McDonald's, lots 44 and 45, south portage road, Eldon township, north Victoria.
" 11. Perrington's, Long Point, Fenelon township, north Victoria
" 12. Carnegie's, Indian Point, Bexley township, north Victoria.
" 13. Newby's, lot 2, concession 11, Thorah township, north Ontario.

No. 14. Rumney's, lots 56 and 57, Front Range, Somerville township, north Victoria.
" 15. Wallace's, lot 60, Front Range, Somerville township, north Victoria.
" 16. Moore's Hill, lots 19 and 20, Gull River Range, Bexley township, north Victoria.
" 17. Ead's, lot 24, concession 2, Somerville township, north Victoria.
" 18. Reid's, (Head river), lot 25, concession 3, Digby township, north Victoria.
" 19. Campbell's, (Deer lake), lot E½ lot 1, concession 8, Laxton township, north Victoria.
" 20, Barrack's, block E, lake shore, Bexley township, north Victoria.
" 21. Fraser's, lot 21, concession 9, Eldon township, north Victoria.

In the list of additions to the museum, p.p. 3 to 13, the valuable donation made by the Rev. R. Ashington Bullen, B. A., F. G. S., of Reigate, England, was mentioned only in a general way, as the specimens had not yet reached Toronto. Meanwhile they have arrived, and the following list supplies some of the necessary details.

EOLITHS, (Rudely chipped and unshapely tools).

16,943-16,955. From South Ash and Shoreham, County of Kent, England.

PALŒOLITHS.

16,922-16,924. From Broom, Devonshire, England.
16,925. Roughly oblong celt, from Warren Hill, Kent, England.
16,926. Leaf-shaped celt, Lakenheath, England.
16,927. Small, oval, or leaf-shaped celt, Mildenhall, Suffolk, England.
16,928-16,931. Leaf-shaped and pointed celts, from Freemantle near Bournemouth, England.
16,932-16,936. From Wandsworth drift, Thames Valley, England.
16,937. Small, pointed celt, Swanscombe, Kent, England, (surface find).
16,938. Leaf-shaped celt, valley type, Northfleet, England.
16,939-16,940. Two pointed celts, Northfleet, England.
16,941. Roughly oblong, knife-like tool, Northfleet, England.
16,942. Large turtle-backed tool, from Mildenhall, Suffolk, England.
16,956-16,967. Celts, mostly pointed, from Milton, Gravesend, England.
16,969. Leaf-shaped celt, from Moulin, Quignon, Abbeville, France.
16,970. Small, carved and coarsely flaked tool, from Montières, Amiens, France.

16,971. Large pointed celt, from Moulin, Quignon, Abbeville, France.
16,972. Thin and curved celt, Montières, Amiens, France.

NEOLITHS.

16,973. Small celt, from Hammersmith, Middlesex, England.
16,974-16,976. Scrapers, Icklingham, Norfolk, England.
16,978. Flint core, Icklingham, Norfolk, England.
16,979-16,981. Scrapers, Icklingham, Norfolk, England.
16,982. Drill or borer, Rudstone, England.
16,983. Small flint knife, Icklingham, Norfolk, England.
16,984. Scraper, Icklingham, Norfolk, England.
16,985. "Fabricator," Icklingham, Norfolk, England.
16,986. Small celt, Eastbourne, England.
16,987-16,988. Small flint knives, Icklingham, Norfolk, England.
16,989. Small flint saw, Icklingham, Norfolk, England.
16,990. Small flint hammer, Icklingham, Norfolk, England.
16,991. Polished celt, near Bushmills, County of Antrim, Ireland.
16,992. Polished celt, from the River Thames at Kingston, England.
16,993-16,995. Three celts, from Somaliland, Africa, collected by Seton Karr.
16,996. Bone breccia, from La Madeleine, Dordogne Caves, France.

BIBLIOGRAPHY OF THE ARCHÆOLOGY OF ONTARIO.

Second Collection.

BY A. F. HUNTER, M.A.

This list of the literature on the Indians of Ontario, containing 280 titles, is a continuation of the one given in last year's Report. The subject is by no means exhausted in these lists; they merely represent what has been available to the compiler.

In the present list are included the titles of articles in connection with a few controversies. For example, the question of the identity of Tecumseh's remains; and the question of the identity of Otinaouataoua, the Indian village where La Salle encamped. The articles on these and other debated questions have been summarized as impartially as possible.

As in the former list, the boundaries of the Province have not been rigidly adhered to in this, but adjacent districts have been also included.

While thanks are due to many persons for assistance, the compiler is especially indebted to Geo. E. Laidlaw, Esq., for the use of his collection of newspaper clippings.

Adam, G Mercer.

Georgian Bay and the Muskoka Lakes.

Picturesque Canada, page 579, (Vol. II.), Toronto, 1882.

Page 582, Fort Ste. Marie on the Wye and the Hurons.

Adams. J.

Sketches of the Tête de Boule Indians, River St. Maurice.

Lit. and Hist. Soc. of Quebec, Vol. II., (1831).

Describes these Indians, who constitute a distinct band, then inhabiting the upper St. Maurice, but now living in the vicinity of Lake Abittibi, northern Ontario. They derived their name from their practice of artificial compression of the head, ("Ballheads").

Addison, Dr. W. L. T.

Microscopical examination of clay specimens from Serpentine Ridge, Innisfil, pages 73-74 in Archæological Report for 1896. (Toronto, 1897).

American Cultivator, (Boston, Mass).

December 14, 1889.

Paragraph noticing the ancient copper mines of Lake Superior, also mentioning traces of an ancient oil well observed "at Enniskillen, Canada," (Enniskillen township, Lambton county?) similar to one found at Titusville, Pa.

Anderson, Capt. T. G.

Extracts from his journal, Orillia *Packet*, February 27, 1885

Anderson, Capt. T. G.—*Con.*

Also reprinted in the Montreal *Gazette* (March 4, 1885). For many years Captain Anderson was Superintendent of Indian affairs. In the extracts published in the *Packet* on the above date, he mentions several spots at We-qua-me-kong in Manitoulin Island, where the Ottawas had habitations when the French traders first arrived. These places had old corn hills, and were marked by fragments of earthen pipes and pottery.

Assikinack, F, (Blackbird).

Legends and traditions of the Odahwahs, (Ottawas). Canadian Journal, second series, Vol. III., pages 115-25 and 297-309.

Bailey, John C., C.E.

Our Indian Names. Toronto *World*, December 19, 1890.

This article, signed "B." consists of a list of fifty-two Indian geographical names in this Province, with comments on the meaning of each name.

Barber, Edwin A.

The Pipe of Peace. Fifteen illustrations, five pages.

An article in *The Continent*, (Philadelphia) of April 4, 1883, describing the different classes of Indian pipes, with illustrations of each class ; examples of nearly all being found in Ontario.

Barrie Advance.

October 9, 1856.

Describes, on the information of P. H. Hough, school teacher, North Orillia, a bone pit, then recently discovered near his residence. It contained about 200 crania, with other bones, fifteen copper (brass ?) kettles, and a variety of ornaments, such as beads, etc.

August 10, 1859.

Contains a long account of a large bone pit on the farm of Andrew Kinghorn, Medonte township. A chapter on "Funeral Rites" is reproduced from a little work on the "Discovery of America and the origin of the North American Indians," by John Mackintosh.

August 23, 1888.

Notices the unearthing of an Indian skeleton at DeGrassi Point, Lake Simcoe, in a high mound of sand. Several relics were found with the bones ; and the hair (in a bunch) was still in a good state of preservation. The paragraph alleges that an engraved stone was found with the remains. Reprinted from an Alliston ? exchange, not named.

Barrie Examiner.

January 3, 1889.

Mentions (under the heading "Orr Lake") a bone pit near the town line between Medonte and Tay townships.

February 13, 1890.

Mentions (under the heading "Shanty Bay") some Indian remains in Oro township. On the Ross farm were found two flint-lock pistols, a flint-lock gun and a sword.

May 12, 1892.

Gives the text of a Treaty of peace between Sir Wm. Johnson and the Hurons (Wyandottes) at Detroit, made in 1764 ; the original document and Wampum being in the possession of Mr Sol. White, lately M.P.P. for North Essex. See New York Colonial Documents, Vol. VII., page 650.

June 9, 1892.

Notices Archæological work of Prof. Henry Montgomery in Medonte and Tay townships during 1876-8, and introduces an account of his recent examination of mounds in North Dakota.

July 28, 1892.

Brief notice of visit to Huron sites in North Simcoe by Messrs. R. W. Large and Fred Milne. Collections made of arrow and spear heads, pipes, stone axes, beads and other relics.

Barrie Examiner.—*Continued.*

August 4, 1892.

Reprint from Orillia *Packet* of notice of collections of relics, made by Messrs. Large and Milne.

March 30, 1893.

Notices the discovery of a single grave in Sullivan township, on the banks of the "Sauble" River. With the remains were an old flintlock musket, a spear and a knife. Reprinted. Source not given.

Beauchamp, Rev W M.

The Iroquois Trail; or, Footprints of the Six Nations.

This important volume on Iroquois history and archaeology, contains a reprint of David Cusick's Sketches.

Bell Charles N.

Indian Mounds, etc. Toronto *Mail,* Nov. 4, 1885.

A letter advocating the formation of a Dominion society for archaeological work. Editorial comments on this proposal appear in the *Mail* of the same date.

Aboriginal trade of the Canadian North-west. Canad. Record of Science, vol. 2 (1886), pp. 102-105.

Evidences of trade from contents of mounds, some on Rainy River.

The Mound-builders in Canada. Proc. Canad. Institute, 3rd Series, vol. 4 (1886), pp. 131-138.

Describes the nature, situation and contents of mounds, including some on Rainy River.

Notices and reviews of this paper: Verhandl. der Berl. Gesellsch. fr. Anthrop., Ethnol., und Urgeschichte, Jahrgang, 1886, s. 192.

Toronto *Globe*, Feb, 22, 1886 (brief). Toronto *Globe*, Feb. 23 (?) 1886 (more extended notice). Toronto *Mail*, Feb. 15, 1886 (notice). Toronto *Mail*, Feb. 22, 1886 (extended abstract). Toronto *World*, Feb. 22, 1886.

Bleasdell, Wm.

The Indian Tribes of Canada. Can. Journal. First series, vol. 3, pp. 209-210.

Boyd. J A., (Chancellor of Ontario).

Judgment in Reg. v. St. Catharines Milling Co. The Ontario Reports, 1885, vol. x, pp. 203-235.

This important judgment gives an exhaustive analysis of the Indian rights in connection with the territory in northwestern Ontario ceded by the Saulteaux.

Boyle, David

Indian Antiquities. Nov. 1885.

A paper dealing more particularly with the antiquities of Beverley Township.

Abstracts: Toronto *Globe*, Nov. 23, 1885. Toronto *Mail*, Nov. 23, 1885.

List of Recent Gifts. Toronto *Globe*, Jan. 14 (?) 1886.

A letter noticing the contributions to the collection of the new archaeological museum.

Indian Relics Toronto *Mail*, Jan. 14, 1886.

A letter noticing the contributions to the collections of the new museum.

The Persistence of Savagery in Civilization. Proc. Can. Inst., third series, vol. 3, pp. 129-31.

Abstract: Toronto *World*, Feb. 22, 1886.

'Canadian Institute Reports.' Toronto *Globe*, Mar. 8, 1890.

A letter, signed 'D B.,' commenting on the action of a local paper in reprinting bodily (without credit to anyone) a quantity of matter from the annual report of the museum.

Archaeological Remains; a factor in the study of History. Trans. Can. Inst., fourth series, vol. 1, pp. 67-71.

Boyle, David.—*Continued*

A paper read at Niagara, 3rd July, 1890.

Archaeological Report for 1896. Appendix to the Report of the Minister of Education, Ontario: 117 pp, 50 illustrations. Toronto, 1897.

Presentation p. 1: acknowledgements, 3; additions to the museum, 5-14: mounds (general remarks), 14-19; Otonabee Serpent Mound, 19-26; Gore's Landing Ridge, 26-28; Miller mounds, 28-30; mounds at Cameron's Point, by W. G. Long, 30-33; Birdsall's Bay, 33; Sugar Island, 33-35; Hastings, 35-37; Gore Island excavation, 37; other islands in Rice Lake, 37-41; embanked hollows, 41-45; small pits or caches, 45; villages sites, 45-46; ossuary in Beverly, 46; grave in Scarboro, 46-47; graves in Whitchurch, by W. A. Brodie, 47; Bald Head, 48; Notes on somes specimens, —flints, 49; stone axe, 50; clay pipes, 51; stone pipes, 51-53; copper, 53-55; beads, 55; shell gorget, 56; stone tablet, 56-57; Preston pendant, 57; triangular, blue glass bead 58; bird amulets, 58-59; small stone carving, 59; bone implements, 59-61; Iroquois dance-mask, 61-62; crania, 62-64: the Scottish plighting stone, Lairg, 64-67; the Rice Lake and Innisfil mounds, by A. F. Hunter, 67-79; Balsam Lake, (with map of the district and two plans of villages,) by Geo. E. Laidlaw, 80-89; Appendix A, Ontario mounds, (T C. Wallbridge) 89-90; B, — Serpent Worship, 91-96; C—the old Bay House, 96-97; D—Bibliography of the Archaeology of Ontario, by A. F. Hunter, 98-116; Obituary notice (Horatio Hale), 117.

Catalogue of Specimens in the Ontario Archæological Museum, Toronto. 83 pp. Toronto, 1897.

Describes 16,455 specimens.

The Philosophy of Woman's Work. A paper read before the Women's Historical Society in Toronto.

Shows why certain kinds of employment have become those of women. Mentions primitive customs in illustration.

Toronto *Globe*, July, 1897.

Brodie, W. A.

Graves in Whitchurch, p. 47, in Archæological Report for 1896. (Toronto, 1897.)

Bryce, George LL.D.

The Mound Builders. Toronto *Mail*, Mar. 13, 1886.

A letter referring (among other things) to the exploration of the mound region of Rainy River, in August, 1884.

Cameron, Duncan.

A sketch of the customs, manners, way of living, of the natives in the barren country about Nipigon, (1804). Masson's 'Bourgeois de la compagnie du Nord-Ouest,' vol. 2, (Quebec, 1890).

Describes their totems or tribes, religion, ceremonies, and other sociological features.

Campbell, P.

Travels in the interior of North America, in 1791-92. (—— 1793.)

At p. 236 is given an account of the Ottawas.

Canada Gazette. (London, Eng.)

Oct. 22, 1885.

Reprint from the Toronto *Mail* of an article commenting on C. N. Bell's examination of mounds.

Canadian Illustrated News.

Jan. 20, 1877.

Contains an article under title 'Prehistoric Canada,' with three plates — two of which have 39 engravings of relics in the collection of Mr Albert White, residing near Aylmer, Ont., and the third plate shows an earthwork fort, Elgin Co. The article describes a village site, containing

Canadian Illustrated News— *Continued.*

upwards of seventy-five ash beds, on the land of John Gillet, Aylmer. Also a bone deposit on the farm of Mr. Chute, Malahide township, some of the larger bones in which had been broken for the marrow. Descriptions of many of the relics shown in the engravings are also given.

Cannington Gleaner.

Feb. 20, 1890.

Article, under heading 'Tales of the Chippewas,' recording historical facts in connection with these Indians in Northwestern Ontario, Minnesota, Wisconsin, etc.

Carrington, Gen. Henry B.

(See 'Donaldson.')

Chadwick, E. M., Q.C.

Remarks on Indian character. A paper read before the Can. Inst., April 10, 1897.

Abstract: Toronto *Mail and Empire*, April 14, 1897.

Chamberlain, A. F., M.A., Ph.D

The Mississaguas of Scugog, Proc. Can. Inst. 3rd series, vol. 7, pp. 2-3.

Abstract of this paper: Toronto *Mail*, Nov. 5, 1888.

Deluge Myths of the Canadian Indians. Proc. Can. Inst. 3rd series, vol. 7, pp. 11-13.

Abstract of this paper: Toronto *Mail*, Dec. 24, 1888.

Charlton, B. E.

The discovery of Burlington Bay. A paper read before the Hamilton Association. Jan. 12th, 1882. (Proceedings.)

Contains a long extract from the journal of Galinee, the Sulpician who accompanied La Salle in 1669. Also gives an account of the examination of three bone pits at Lake Medad, Halton Co., of some Indian relics and the traces of Indian cultivation and settlement there.

Reprinted (in part) at p. 34 of J. H. Smith's 'Historical sketch of the county of Wentworth and the head of the lake.' (Hamilton, 1897).

Clark, Peter Dooyentate.

The Origin and Traditional History of the Wyandottes, and Sketches of other Indian Tribes of North America. Toronto, 1870. 160 pp.

Gives some traditions of Tecumseh's League in 1811 and 1812.

Collingwood Bulletin.

July 9, 1891.

In a sketch of Mackinaw Island, notices the Indian burying ground there.

Collingwood Enterprise.

Oct. 17, 1889.

Notices an iron weapon found with other Indian relics near Bruce Mines, Algoma.

June 23, 1892.

Notices the discovery of a skeleton at Thornbury, the bones being of unusual size.

Donaldson, Thomas

The Six Nations of New York. (Extra Census Bulletin of the United States), Quarto, 1892.

This bulletin consists of a statistical part (pp. 1-17) by Thomas Donaldson, and of a descriptive part (pp. 19-83) by Gen. Henry B. Carrington. Illustrated by maps and portraits of prominent Indians. The volume is valuable in connection with the Iroquois near Brantford, Ont., and contains information on the Iroquois mode of self-government, religious ideas, beliefs, dances, wampum, farming and other industries, social life, games, morals, education, schools and asylums, sanitary statistics, traditions and nomenclature, annuities paid leases and citizenship.

Dundalk Herald.

Oct. 14, 1886.

(Reprint ?) Notice of examination of two mounds at Skull point, on the river about five miles from Napanee. One contained the skeletons of two men, arrow heads, stone chisel, and stone hammer.

Ellis, Prof. George E.

The Red Man and the White Man in North America, from its Discovery to the Present time. Boston, 1882.

At p. 478, cites the policy of Great Britain in regard to the rights of Indians to possession and occupancy of lands. 'England has always recognized all rights of the kind, except that of alienation.'

Ellis, John.

Humber Indian Relics. Toronto *Mail*, Jan. 7, 1886.

A letter reviewing the facts in connection with the relics found near High Park.

Farley, James J.

Tecumseh's Body. Belleville *Ontario*, Oct. 12 (?) 1876.

Reprint: Toronto Weekly *Globe*, Oct. 20, 1876, under heading 'More about Tecumseh.'

A letter in which Mr. Farley, of Thurlow, dissents from the view that the remains exhumed at Moraviantown were those of Tecumseh.

Farr, C. C.

The Legend of Frog Rock, Lake Temiscamingue. *Forest and Farm* (Toronto), Mar. 29. 1890.

This sketch appeared anonymously, and likewise three subsequent sketches in the same publication, the last, however, signed 'C. C. F.' They are known to have been written by C. C. Farr, of Haileybury, Lake Temiscamingue. The writer gives a transformation legend connected with a Huronian rock on the west shore of the lake.

The Legend of the Chief's Island, Lake Temiscamingue. *Forest and Farm* (Toronto), April 19, 1890.

This sketch appeared anonymously, but was subscribed "Lake Temiscamingue, Que"

An Indian Legend of the Upper Ottawa. *Forest and Farm* (Toronto), May 3, 1890.

This sketch appeared anonymously, but was subscribed "Lake Temiscamingue, Que."

The White Rocks of Temiscamingue. *Forest and Farm* (Toronto), May 10, 1890.

Signed "C. C. F." and subscribed "Lake Temiscamingue, Que." The writer relates an Indian legend of a limestone cliff at Wabikeesick's Bay.

The Lake Temiscamingue District. Toronto, 1893, 16 pp. and map. Issued by the Ontario Government.

At p. 12, the writer refers to Frog Rock, 'where the Indians eat the enchanted frog.'

Fitz-Gibbon, Miss Mary Agnes

A Deed Signed by the Renowned Chief Pontiac. The *Week* (Toronto), July 3, 1896.

An article giving the text, with English translation, of a deed of land near Windsor, said to have been signed by Pontiac.

Freeman, Miss Alice B.

The Town of Barrie. Toronto *Empire*, Oct. 11, 1888.

An article signed "Faith Fenton' in which reference is made to large numbers of Indian relics found in the vicinity of the town, mentioning remains found in digging the foundations of houses.

Freeman, J. B., M.P.P.

Indian Corn-pits. Canadian *Advance*, Aug. (?) 1888.

Reprints observed: Toronto *World*, Aug. 29, 1888; Woodstock *Sentinel-Review*, Aug. 31, 1888.

An account of eighteen corn-pits or 'câches' in Townsend township, Norfolk county.

Galt Reformer,

Oct. 2, 1878.

Paragraph giving account of discovery of a bone-pit on farm of Thomas Westwood, St. George. The pit had twenty-five skeletons Another in the same field, a number of years before, was found to contain sixteen skeletons.

Grant, Peter

The Saulteux Indians (about 1804) Masson's 'Bourgeois de la Compagnie du Nord-Ouest,' Vol. II. (Quebec, 1890.)

The Saulteux country meant by this writer extended from Sault Ste. Marie, Ont., to Lake Winnipeg. His narrative describes the Indians who occupied this territory, their personal appearance, dress, occupations, food, etc.

Gray, Rev. John, D. D.

Indian Remains. Toronto *Globe*, Oct. 20, 1856.

This article, though unsigned, is known to have been written by Dr. Gray, Orillia. It describes a bone-pit, just then found about six miles from Orillia, containing from 150 to 200 skeletons. See also 'Barrie *Advance*, (Oct. 9, 1856)' and 'Sir Daniel Wilson.'

Hale, Horatio, M A.

The Tutelo Tribe and Language.

Seventh Annual Report of the Bureau of Ethnology, pp. 112-114.

Announces the discovery in Ontario of the last survivors of the Tutelos, formerly of Virginia and North Carolina.

Ham, G. H.

Among the Indians. Toronto *Mail*, March 6, 1886.

A three column article, signed 'G. H. H.,' discussing some traditions and ceremonies of the Ojibway and Cree Indians in the Rainy Lake district.

Hamilton, J. C., M.A., LL B.

The Panis—Canadian Indian Slavery in the Eighteenth Century. Proc. Can. Inst., Fifth Series, Vol. I, pp. 19-27.

A paper read, December 12, 1896. It contains references to Panis in the early writers; Panis at Niagara and Amherstburg; the Huron Treaty of 1764; the last Pani.

Harvey, Arthur

The Neutral Nation. Toronto *Mail*, Oct. 24th, 1885.

A two column letter giving the leading facts known about the Neutrals. It also comments on statements made in the *Mail*, one week previous, in connection with a Masonic token found in an Indian grave at Lake Medad, Halton Co.

The Discovery of the Mississippi. Toronto *Mail*, Nov. 7, 1885.

This letter discusses some points in connection with La Salle's journey to the Mississippi. It continues the controversy on the Lake Medad site.

The Discovery of Lake Superior. Toronto *Mail*, Nov. 18, 1885.

A letter on the connection of Marquette and Joliet with the discovery of the Mississippi. Also on the position of La Salle's camp, which he inclined to place "closer to Burlington Bay" than tke Lake Medad site. Father Menard's travels in the west are also reviewed.

Harvey Arthur—*Continued.*

Sundry Old Indian Affairs. Toronto *Mail*. Dec. 11, 1885.

A letter in which it is claimed that La Salle's camp was in Beverly township, and not at Lake Medad. Some comments are made on the Algonquin origin of the word "Otinaouatoua."

Indian Tombstones. Toronto *Mail*, Dec. 30, 1885.

A letter commenting on the discovery of an aboriginal "tombstone" near High Park, Toronto. The writer points out the improbability of finding inscriptions on rocks or stones, as the Indians had no tools for stone-carving.

Rock Inscriptions. Toronto *Mail*, Jan. 4, 1886.

A letter replying to the arguments of Robert Kirkwood as to the inscriptions at Dighton Rock and Cunningham's Island, Lake Erie.

Inscriptions. Toronto *Mail*, Jan; 9, 1886.

A letter replying to some further arguments of Robert Kirkwood. The writer refers to Schoolcraft's account of the inscriptions on Cunningham's Rock, Lake Erie.

Bone Caves—With especial reference to prehistoric man. Trans. Can. Inst., fourth series, vol. ii., pp. 116-120.

Treats of: the similarity between the habits of stone age man in Europe and (the Indian) in America: correction, from American analogy, of some current European ideas on this subject.

Hirschfelder, C A.

Antiquities of America. A lecture to the Parkdale Public School.

Abstract given in Toronto *Mail*, Feb. 7, 1881.

The discourse was concluded with a few remarks on his own discoveries in Ontario.

The Manners and Customs of the Aboriginal Indians.

Abstracts given: Toronto *Globe*, Mar. 6, 1882. Toronto *Mail*, Mar. 6th, 1882.

This paper described generally the aborigines of America.

Prehistoric America. A lecture delivered at Richmond Hill.

A summary of this lecture appeared in the Toronto *Mail*, Feb. 23, 1885.

An Archæological Museum, Toronto *Globe*, April 14. 1885.

A letter on collections of Canadian Archæological specimens.

The Neutral Nation. Toronto *Mail*, Nov. 4, 1885.

A reply to Arthur Harvey's letter, more particularly in regard to Otinaouataoua, an Iroquois village at which La Salle encamped "on his way to discover the Mississippi." The writer considers that it was situated on the borders of Lake Medad.

The discovery of the Mississippi and the name "Otinaouataoua." Toronto *Mail*, Dec. 9, 1885.

A letter with a quotation from Galinee's Journal to show that the distance of the Iroquois village from Burlington Bay agrees with the position of Lake Medad. It also includes comments by Gen. John S. Clark and Horatio Hale on the village 'Otinaouatoua'—its position and the meaning of the name.

The Indian name Tanaoutaoua. Toronto *Mail*, Dec. 15, 1885.

A short letter correcting two errors in his previous communication.

The Alleged Archæological Fizzle. Toronto *Mail*, Jan. 4, 1886.

A letter in reply to the statements of critics in regard to the carved "tombstone." The writer puts forward arguments in proof of the genuineness of the relic.

Hirschfelder, C. A—*Continued.*

A short letter. Toronto *Mail*, Jan. 5, 1886.

A reply to criticisms. Mentions a carved stone pipe he had just received.

The Aboriginies. Toronto *Mail*, Feb. 7, 1887.

A letter correcting some of the statements attributed to himself in the published interview of issue, Jan. 29.

Hunter, A F., M A

Naming Lake Simcoe. Orillia *Packet*, July 5, 1889.

A letter discussing the Indian and French names of Lake Simcoe. Suggests that the name 'Aux Claies,' referring to hurdles or latticework employed in the taking of fish, is explained by the Huron rows of stakes, or the 'fence,' at the Narrows.

History of Simcoe County, chap. xvii. Barrie *Examiner*, March 6, 1890.

Notices the discovery of a bonepit on the Cosgrove farm, lot 15, con. 14, West Gwillimbury, in 1835.

The Site of the Mission of Ste. Marie on the Wye. Trans. Can. Inst., fourth series, vol. 4, p. 230.

Abstracts: Toronto *Empire*, Dec. 12, 1892; Toronto *Globe*, Dec. 12, 1892; Toronto *Mail*, Dec. 12, 1892.

The Rice Lake Mounds and Innisfil Effigy, pp. 67-79, in Archæological Report for 1896. (Toronto, 1897.)

Mounds at Rice Lake, 67-69; Innisfil serpentine ridge, 70-72; examination of its structure, 72-76; sites of ancient villages in the neighborhood, 76-78; other effigies of a similar kind, 78; remarks on the significance of effigies, 79.

Bibliography of the Archæology of Ontario, pp. 98-116 in Archæological Report for 1896. (Toronto, 1897.)

Contains 100 titles referring to Ontario, collected from Dr. Chamberlain's bibliographies for the Dominion; with the addition of 100 new titles, making 200 altogether.

New Aspects of the Old Huron Missions. Massey's *Magazine* (Toronto) for May, 1897, vol. 3, p. 350-354. Reprinted in Orillia *News-Letter*.

Archæological Notes on the Hurons in the new edition of the Jesuit Relations, published by the Burrows Brothers Company, Cleveland, Ohio. (R. G. Thwaites, editor.)

Vol. 5 (1897) contains notes on Ossossane (p. 292), Toanché (p. 293), Ihonatiria (p. 294), the nation of the Bears (p. 278), the Tobacco Nation (p. 279), and a sketch of "Archæological Research in the Huron Country."

Hunter, J Howard M A.

From Toronto Westward. Picturesque Canada, p. 441 (vol. II). Toronto, 1882.

P. 455 notices the Iroquois on the Grand River; p. 519 notices the existence at Fort Wayne, Ind., of a stone idol, the Manitou of Lake Erie; p. 523, The Wyandots on the Detroit River; p. 535, The battlefield at Moraviantown cleared in 1846, and the grave of Tecumseh; alleged finding of his remains in 1876.

Hunter J M., M A, LL B

Suggestions. Barrie *Examiner*, Oct. 25, 1888.

Reprinted in the Orillia *Packet* (Nov. 9, 1888). This article regrets that while many Indian relics have been taken from the historic county of Simcoe, no attempt has been made to gather a public collection in the home of the Huron race. An appeal is made for information, etc.

Ingersoll Sun.

May (?) 1892.

Notices original parchment of the treaty between the Crown and the Wyandottes in 1764, in the possession of Mr. Sol White, who also has the wampum in connection with it.

James, C C., M.A.

Lake Simcoe, Toronto *Globe*, May 26, 1896.

A brief letter suggesting that the old name of Lake Simcoe (Lac aux Claies or 'Hurdle' Lake) was derived from the Indian fish fence of pickets at the Narrows.

Johnson, Miss E. Pauline.

The Iroquois of the Grand River. Harper's *Weekly*, June 23, 1894. Vol. 38, pp. 587-9, with 18 illustrations by A. H. H. Heming.

Gives a description of their present condition, their occupations, religious rites of the pagan members, and schools. Contains comparisons with their primitive condition.

Reprints observed : Barrie *Examiner*, July 12, 1894. Oakville *Star*.

Kelton, Dwight H., M.A.

Indian Names, etc. Detroit, 1888, pp. 55.

It includes discussions of the names Algonkin, Garden River, Manitoulin Island, Mindemoya Lake, Ottawa, Penetanguishene, Sault Ste. Marie, etc.

Kerr, Wm.

The old Indian camping ground.

A paper by Mr. Kerr, of Chatham, on a site in the neighborhood of that town. It enumerates some of the relics found.

Notice : Toronto *Mail*, May 4, 1886.

Kirkwood, Robert.

The Adjedatigwun, or Death-stick. Toronto *Mail*, Jan. 1, 1886.

A letter commenting on Arthur Harvey's. The writer claims that the Indians did carve rocks, and cites the 'pictographs' of Cunningham's Island, Lake Erie, and the Dighton Rock.

Rock Inscriptions. Toronto *Mail*, Jan. 6, 1886.

A letter in reply to the arguments of Arthur Harvey.

Laidlaw, Geo. E.

The Indian Tribes. Toronto *Mail*, Nov. 11, 1885.

A letter endorsing the formation of a Dominion Archæological Society, as proposed by Chas. N. Bell (q.v.)

Indian Relics. Lindsay *Warder*, Aug. 14, 1896.

A short letter enquiring for relics for the Provincial Museum.

Indian Relics Orillia *Packet*, Aug. 21, 1896.

A short letter enquiring for relics for the Provincial Museum.

Balsam Lake, pp. 80-89, Archæological Report, for 1896. (Toronto, 1897).

This article describes five village sites, then recently examined, with diagrams showing groups of pits at two of them. The map of village sites includes those of the map in the Seventh Report, with the addition of these five new ones.

The Aboriginal remains of Balsam Lake. The American Antiquarian, vol. xix., p. 68 (March, 1897).

Second Paper. The first paper (noted in the first instalment of this bibl.) described the trails, mound graves, remains of village sites and other features of the district. This (the second) notices the different kinds of relics and their relative frequencies —celts chisels, gouges, hammer stones, rubbing stones, slate knives, chipped implements, gorgets and banner stones, mortars, discs, horn, bone and shell implements.

Laidlaw, Geo. E.—*Continued.*

Aboriginal remains of Balsam Lake. The American Antiquarian, vol. xix, p. 138 (May and June, 1897.)

Third Paper. It classifies and describes the different kinds of tobacco pipes, with five illustrations of pipes and a page of cuts (eleven) of stone relics from Ontario.

Lindsay Post.

Sept. 7, 1888.

Notices the discovery of an Indian skeleton with bones of immense size.

June 21, 1889.

Reprint of paragraph from the Bowmanville *Statesman*, announcing a lead tomahawk used as a pipehead, found in Cartwright township, on the shore of Lake Scugog.

Nov. 29, 1889.

Paragraph mentioning a stone chisel, nineteen inches long, found on Dr. Cornwall's Farm, east of Omemee.

Jan 12, 1894.

Reprint from the Orillia *News Letter*, of a notice of a carved stone pipe found near Price's Corners, Simcoe county.

April 13, 1894.

Paragraph announcing the death of the last pure-blooded Iroquois at Caughnawaga.

Aug. 14, 1896.

Notice that G. E. Laidlaw has undertaken to collect a few Indian relics for the Provincial Museum.

Feb. 26, 1897.

Enumeration of Relics from Victoria county mentioned in the annual report of the museum.

Lindsay Warder

Jan. 2, 1879.

Article entitled "Manners and Customs of the Hurons."

Sept. 18, 1896.

Reprint from Peterboro *Examiner* of account of some discoveries in the Rice Lake district, by David Boyle.

Oct. 23, 1896.

Paragraph noticing the serpent-shaped mound (Effigy ?), Innisfil township, Simcoe Co.

Oct. 30, 1896.

Reprint from Toronto *Globe* of the notice of some additions to the Provincial Museum.

March 12, 1897.

Descriptions of relics gathered in the Balsam Lake district by Geo. E. Laidlaw. Reprint of paragraphs from the annual report of the museum.

Lindsay Watchman.

Sept. 17, 1896.

Reprint from Peterboro *Review* of notice of discovery by David Boyle of a skeleton on an island in Rice Lake, with a large number of beads.

Oct. 29, 1896.

Reprint from Orillia *News Letter* of paragraph describing ancient fish stakes at the Narrows, Lake Simcoe.

London Advertiser.

Nov. 4, 1879.

Short article reprinted from the Natchez, (Miss.) Democrat, on Tecumseh's powder-horn taken from the body of the famous chief.

Long, W. G.

Exploration of Mounds at Cameron's Point, Rice Lake, pp. 31-33, in Archæological Report for 1896. (Toronto, 1897.)

Remarks on remains at Birdsall's Bay, page 33.

Lubbock, Sir John, Bart, M.P., D.C.L.

Prehistoric Times, as illustrated by ancient remains, and the Manners and Customs of Modern Savages. First edition, 1865, fourth edition, 1887.

Lubbock Sir John Bart M P., D C.L.—*Continued.*

Copper occurring in a native condition—use of the Lake Superior copper mines by the Indians, page 4; friendship of the Indians for the French because the latter never disturbed the graves of the aborigines, page 135; Sir D. Wilson on the Lake Superior copper mines used by the Indians, pages 260, 261; Prof. Croft on absence of tempered copper, page 261; allusion to the earthworks of British America as "very scarce," page 264; absence of any word for "to love" in Algonquin languages, pages 533, 578, 583; notice of the absence, on the authority of Colden, of public worship and any word for 'God' among the Five Nations, page 590; concealment of persons' names among Algonquins, page 595.

McAdam, Capt. J. T.

The Muskoka Lakes and the Georgian Bay, pp. 75, 76. Toronto, 1884.

Pages 35, 36. Notices, Indian legends of ancient conflicts at Spanish River; (suggested by communal graves there?) Page 41, meaning of the word 'Mackinac' and traditions connected with that island.

Mackenzie, Geo. A., B.A

The Upper Lakes. Picturesque Canada. p. 239, (vol. i). Toronto, 1882.

Page 250. Notices the deification of Lake Superior by the aborigines. Page 251, Copper on Michipicoten Island known to the Indians, as appears from the Jesuit records. Refers, also, generally to the aboriginal copper mines of Lake Superior. Page 261, The Storm Spirit of Thunder Cape. Page 273, Remains of Indian Vapour Bath on the Kaministiquia River (with illustration).

Mackenzie, J B

The Six Nations Indians in Canada. Toronto, 1896.

Contains information on the appearance, manners and customs of the Iroquois on the Grand River Reservation, their traditions, history and archæology. Has a collection of all the more important legal decisions which affect Indian lands or rights.

Mackintosh John

The Discovery of America by Christopher Columbus, and the origin of the North American Indians. Toronto, 1836, pp. 1-152.

The writer of this little work witnessed the customs of the Mississaguas at Detroit and other bands, and records his impressions of them. Among other features the book includes a chapter on "Funeral Rites."

Mallery, Col Garrick

Picture writing of the American Indians. Tenth Annual Report of the Bureau of Ethnology for 1888-'89. Washington, 1893.

Mentions pictographs on Nipigon Lake, thirty miles from Lake Superior.

Israelite and Indian. Orillia *Packet*, May 30, 1890.

A short letter in reply to some remarks in the *Packet's* review of his paper, 'Israelite and Indian.' He asserts that, although he had made comparisons between Israelite and Indian, he did not identify them.

Masson, L. R

(See 'Peter Grant' and 'Duncan Cameron.'

Matthews, Dr. Percy W. P. (York Factory)

Early Development of Aboriginal Women. Proc. Can, Inst., Third Series, vol. 4, pp. 181-86.

Abstract: Toronto *World*, April 12, 1886.

Merritt, W Hamilton.

The Six Nations. Toronto *Empire*, Jan. 19, 1889.

A paper on the form of government among these Indians.

Midland Free Press.

Oct. 3, 1889.

Brief notice of Indian graves in the park grounds, Midland.

Nov. 26, 1896.

Notice of a sword found in Tiny township, bearing the date 1619.
Reprint observed : Orillia *News Letter*, Dec. 3, 1896.

Monetary Times (Toronto).

Jan. 14, 1894.

Article—"An Indian Historian"—gives a sketch of the life of Peter Dooyentate Clark, whose death took place Dec., 1893. Notices, some unwritten wanderings of the Wyandottes, recorded by Mr. Clark in his history ; also antiquarian and historical articles contributed by him to the Amherstburg *Leader* during the last year of his life.

Montreal Gazette

March 4, 1885.

Notice of paper by J. M. Le Moine, Quebec, read before the Royal Society of Canada, in which reference is made to "the forthcoming work of Dr. J. C. Taché on the Indian burial grounds near Lake Simcoe."

Montreal Weekly Witness.

Aug. 30, 1882.

Under the heading 'Section H.—Anthropology' is given an abstract of Dr. Daniel Wilson's vice-presidential address read before this section at the Montreal meeting of the American Association for the Advancement of Science. The address discusses the typical headform of Ontario aborigines.

Moodie, Susanna

Roughing it in the Bush ; or, Forest Life in Canada.

This book first appeared in England in 1850. At page 302, First Canadian Edition (Toronto, 1872), appears the Mississaga superstition as to drowning, and disposal of the body of a drowned Indian.

Morris, Hon Alex., P.C.

The Treaties of Canada with the Indians of Manitoba and the North-west Territories. Toronto, 1880.

Has references also to the Indian tribes in North-western Ontario.

Mulvaney, Charles P., M.A., M D

The Upper Ottawa. Picturesque Canada, p. 194 (vol. i.). Toronto, 1882.

Page 195, notices the finding, at Portage du Fort, on the Calumet Rapids, Ottawa River, of a rapier and an astrolabe, believed to be relics of Champlain. Page 206, mentions "Oiseau Rock," on the upper Ottawa, with which is associated an Indian legend of an eagle carrying off a papoose to its eyrie on the summit. Page 208, illustration of Oiseau Rock.

Murray, Miss Louise.

The Niagara District. Picturesque Canada, p. 343 (vol. i.). Toronto, 1882.

Page 344, discusses the meaning of the Indian word "Niagara." Page 348, Niagara Falls an object of superstitious fear to the Indians, and annual offering of a beautiful young girl. Page 367, Indian legends connected with Devil's Hole, a cavern on the New York side of the river.

New Dominion Monthly.

December, 1878.

Article entitled "Oka and its Inhabitants."

Newmarket Era.

June 27, 1890.

(Reprint ?) Notice of an Indian skeleton found in Hamilton township (Northumberland county), between lots 31 and 32, 4th concession, near an old trail from Port Hope to Rice Lake.

May 19, 1893.

Notices a bird amulet of Huronian slate, found in 3rd concession Whitchurch, 5½ inches long.

New York Herald.

July 25, 1897.

Article (with illustration) describing a natural rock effigy—"Devil's Head," or "Skull Rock,"—2½ miles from Rat Portage, with Indian legend in connection with it.

Norrish, Joshua.

Early History of Nasagiweya' pp. 100. Guelph, 1889.

Notices at page 30 some Indian remains found on lot 7, con. 7, of that township, including about 300 skulls.

Oakville Express.

Nov. 1, 1878.

Reprint. Mentions the discovery of a large bone-pit on the farm of W. Errington, near Wyebridge, Simcoe Co.

Orillia News-Letter.

May 1, 1890.

Notices the discovery of some Indian relics in the grounds of the Red Cross Hospital, Orillia, including two silver brooches and a double-barred cross.

Jan. 5 (?), 1894.

Notice of carved stone pipe found near Price's Corners, Simcoe Co. "It represents a squaw carrying a round basket on her back." Reprints observed: Barrie *Examiner*, Jan. 25, 1894; Lindsay *Post*, Jan. 12, 1894.

Orillia Packet.

Apr. 24, 1885.

Abstract of a paper by Jas. Bain, jr., on the old French fort of Ste. Marie on the Wye.

May 1, 1885.

Notice of a circular issued in connection with the formation of an Archæological Museum in Toronto.

May 2, 1890.

Notices the discovery of a number of Indian relics in a single grave at the Red Cross Hospital, Orillia.

May 9, 1890.

Notices Col. Mallery's paper, "Israelite and Indian," in which comparisons are made between the two races. (See also "Mallery.")

Dec. 11, 1891.

Notices a fine-grained, greenish stone implement, axe at one end and gouge at the other, found on the farm of J. S. Nelson, Oro township; also a large burial pit opened some years before, on the same farm. Reprinted: Barrie *Examiner*, Dec. 17, 1891.

July 29, 1892.

Notice of visit to Huron sites in North Simcoe made by Messrs. R. W. Large and Fred. Milne; mentions three well-made stone pipes secured by them.

Sept. 9, 1892.

Notice of an ancient camping ground at Shield's Point, near Lake Talon and Mattawa River, where two routes converge—the one through Talon and Trout lakes, the other through the Kabaska and Nosbonsing to the waters of Nipissing. Notices the finding of a pewter cup with Champlain's name engraved upon it, near the place. This paragraph was probably reprinted from an account written by A. C. Osborne, and published in the North Bay *Despatch*. See also Mr. Osborne's paper, "Memories of Champlain," read before the Can. Inst. (Hist. Section), April 20, 1893.

Sept. 30, 1892.

Two-column reprint from Copway's History of the Ojibway Nation on the war between the Ojibways and Eastern Iroquois. Includes reference to Ontario remains—as those in Percy township, Northumberland county.

Dec. 2, 1892.

Describes a large bone-pit found in Medonte township, about 35 years before. Mentions the articles found in it. Reprint observed: Barrie *Examiner*, Dec. 8, 1892.

Mar. 3, 1893.

Mentions a flattened gold ring with ecclesiastical inscriptions, and suggests that it may be a "relic of the days when Canada belonged to France."

Orillia Times.

May 1, 1890.

Notices the unearthing of Indian relics at the Red Cross Hospital, Orillia: a silver cross, two silver brooches, a skull, tomahawks, knives, etc.

June 26, 1890.

Notice of a steatite pipe, found in Oro township, Simcoe County.

July 24, 1890.

Notices the unearthing of an Indian skeleton in Mary street, Orillia.

Ottawa Free Press

Nov. 14, 1896.

Notice of four relics found in Eardly township, which adjoins the Ottawa river, in Quebec province. Presented to the National Museum, Ottawa.

Nov. 30, 1896.

Notice of five relics found in a grave on an island in Lake Deschenes, an expansion of the Ottawa river. Nearly all were of European manufacture.

Paisley Advocate.

July, 1891.

Notices a stone tomahawk found on Robt. Bannerman's farm. Notices also the relic collection of Jas. Rothwell, Walkerton.

Penetanguishene Herald.

October 10, 1889.

Notices the discovery of a bone pit at Midland.

September 10, 1891.

Notice of tomahawk cut out of the centre of a log, over two feet in diameter, near Ottawa. (Presumably, it had been inserted in the tree when young, for hafting.)

Read, D.B., Q.C.

The Hurons. Trans. Can. Inst. Fourth Series, vol. I., pp. 86-95.

A summary from historical sources, of the chief facts known concerning this people.

Sangster, Charles.

Orillia and the Severn. Kingston *Whig*, August, 1859.

Reprinted in the Barrie *Advance* (Aug. 31, 1859). A long letter, signed C.S., and dated Orillia, Aug. 15, 1859, in which he refers to several Indian rock-paintings at the Longford quarries. He also refers generally to the bone pits and Indian relics found in the surrounding district. Some of the expressions used in this letter were incorporated about the same time in the poet's well-known sonnet, "Woods Near Orillia."

Scadding, Rev. Henry, D.D.

A group of relics. Toronto *Mail*, August 29, 1888.

An article on the discovery of a burial plot in the Exhibition Park, Toronto, and suggesting that it was connected with the old French fort (Rouille).

Some lapsed names in Canadian local nomenclature. Proc. Can. Inst. new series, May 1897, vol. I., part 2.

The meanings of many Indian geographical names are given. Abstract: Toronto *Mail and Empire*, (Nov. 30, 1896.)

Smith, Abigail.

Tecumseh's burial. Montreal *Witness*, Nov. 9, 1889.

A letter dated "Harwich, Oct. 31, 1889," in which the writer inclines to the belief that Tecumseh's bones were finally laid "among the graves of his fathers on the banks of the lower Ohio."

Smith, Mr. Jacob.

Interview on the identity of Tecumseh's remains. St. Thomas *Home Journal*: Sept. 7, (?) 1876. Reprint, Toronto *Weekly Globe*, Sept. 15, 1876.

Contains the reasons by Dr. Smith, of Ridgetown, for not believing the remains exhumed at Moraviantown to be those of Tecumseh.

Smith, Joseph H.

Historical sketch of the county of Wentworth and the head of the lake. Hamilton, 1897, pp. 140.

Chapter 2 contains descriptions of the Indian remains found in Wentworth and Halton counties.

Stayner Sun.

June 11, 1890.

Notices a number of Indian relics found by farmers doing statute labor in Nottawasaga township.

Taylor, H. J.

The discovery of the Mississippi. Toronto *Mail*, Nov. 13, 1885.

A letter on Arthur Harvey's statements in the controversy upon the Lake Medad site. The writer asserts that La Salle was preceeded by Father Menard in the discovery of the Mississippi.

Toronto Empire

February 12, 1889.

Notice of the collection of Indian relics at the Canadian Institute.

February 22, 1890.

Letter signed "A. H." on the subject of establishing a provincial museum.

March 26, 1890.

Notices a proposal to form an "Indian Research Society"

July 28, 1890.

Notice of some additions to the collection in the archaeological museum.

Toronto Evening Telegram.

June 28, 1886.

Notice of Indian remains and relics found on Withrow Ave., Toronto.

May 12, 1887.

Announces the discovery, at intersection of Broadview ave. and Smith street, Toronto, of a tin box containing two human skulls. "Upwards of 100 skulls....were dug up about a year ago, about 100 yards east of this spot." (On Withrow ave.)

Toronto Globe.

Nov. 12, 1878.

Mentions the finding of a small brass hatchet-head or pipe in Dalhousie township, (Lanark County), in the same field with other Indian relics.

Sept. 16, 1879.

Paragraph mentioning the discovery of a bone pit on lot 9, concession 5, Tay township, Simcoe County.

Nov. 10, 1879.

Notice of the discovery of a quantity of wampum in caves on the banks of the Grand River at Elora. Mentions also, traces of an ancient portage and river crossing on the banks of Irvine creek, just above where it empties into the Grand River.

Nov, 25, 1879.

Notice of relics gathered by Captain Milne, Markham, destined for the Canadian Institute, Toronto.

Jan. 3, 1880.

Paragraph (reprinted from the Victoria, B. C., *Standard* of December 11), on a national museum at Ottawa.

April 6, 1881.

Notice reprinted from *News*, (Port Hope) of the discovery of a single grave and relics (including pieces of antimony) on the property of J. A. Brown, Augusta street, Port Hope.

May 24, 1881.

Article, entitled "The Red Man," giving account of the discovery of a bone pit on lot 6, concession 4, Markham township, excavated by Sir D. Wilson.

Jan. 12, 1882.

Notice of the finding of an earthen pot near Pefferlaw, York County.

March 9, 1882.

Paragraph mentioning a proposal to form an archæological society in Toronto.

April 25, 1885.

Paragraph noticing the proposal for an archæological museum.

Toronto Globe.—*Continued.*

Oct. 5, 1885.

Under heading "A Valuable Archæological Find," notices the excavation of a grave containing the remains of about fifteen (fifty ?) persons, on the Dwyer farm, Beverly township, Wentworth County. A list of the articles found is added.

Oct. 30, 1885.

Notice of relics received by David Boyle for the Provincial Museum.

Dec. 19, 1885.

Article describing the peace-pipe of the great chief, Tecumseh.

Dec. 19, 1885.

Notices the meanings of several Indian geographical names in this province.

Jan 21, 1886.

Notice of a deputation having interviewed the Ontario Government in behalf of aid for an archæological museum.

Feb. 22, 1886.

Brief abstract of a paper by David Boyle.

June 26, 1886.

Article under heading 'Naming the Water-ways." discusses the meanings of many of the Indian geographical names in Ontario.

Nov. 13, 1886.

Notice (in a summary of an address by Prof. VanderSmissen' of the preparation of an Act to make all prehistoric monuments (such as mounds) public property, and to make it a misdemeanor to dig in or disturb them.

July 8, 1889.

Notice of explorations in Nottawasaga township, by David Boyle. Includes a letter from Dr. Parkman, the historian. Reprint observed, Barrie *Gazette*, July 10, 1889.

Aug. 15, 1889.

Under the heading "Indian Relics," is given a column article describing some of the latest relics acquired by the Archæological Museum, Toronto. Also notices Mr. Boyle's trip to Clearville and examination of the earthwork there.

July 14, 1894.

Notice (p. 3) and illustration (p. 2) of "Bloody Cliff," on the shore of Lake Simcoe (L. Couchiching ?), the traditional scene of a battle between two Indian tribes. (Shown by rock-paintings.)

June 18. 1897.

Article on the formal re-opening of the Educational Art Galleries and Museum, Toronto Notices the removal of the archæological exhibit from the Canadian Institute building to the newly enlarged structure.

July 30, 1897.

A despatch from Collingwood notices the discovery of a human skeleton in the caves of the Blue mountains, and suggests that it was the remains of an Indian of the Tobacco Nation.

Toronto Globe (Weekly.)

Sept. 8, 1876.

A despatch dated "Ridgetown, Aug. 31," gives an account of the discovery of an Indian skeleton, alleged to be that of Tecumseh. The same issue contains three paragraphs on the same subject.

Oct. 6, 1876.

An editorial commenting on the supposed discovery of Tecumseh's remains.

Aug. 20, 1886.

Announcement (reproduced from the Nipissing *Times*' of the discovery of an ossuary on French River, containing about 200 skeletons.

Toronto Mail

August 7, 1877.

Paragraph describing a village site and bone-pit on the farm of Jas. Dwyer, con. 7, Beverly township, Went worth Co.

October 10, 1879.

Paragraph describing the opening of a grave, in the vicinity of Midland, containing fifteen skeletons.

October 10, 1879.

Notice of the discovery of a single grave, East Whitby, containing a number of relics beside the skeleton.

Toronto Mail.—*Continued.*

January 13, 1880.

Paragraph advocating the establishment of a national museum at Ottawa.

April 2, 1881.

Notice (reprinted from the *News*, Port Hope) of the discovery of a single grave and relics (including pieces of antimony) on the property of J. A. Brown, Augusta street, Port Hope.

July 25, 1882.

Notice of the discovery of a Jesuit relic—a rosary and brass crucifix attached to it—in Medonte township, Simcoe Co.

August 29, 1882.

An article, entitled 'Primeval North-West,' discusses Champlain's views on the geography of the lake district—Green Bay, Lake Superior, Sault Ste. Marie, etc.

December 23, 1882.

Notice of a trepanned (or wounded ?) skull found in an ossuary near Orillia.

January 6, 1883.

Paragraph under heading 'Indian Relics' mentions deposit of human bones on "Head Island," near Parry Sound. Reprinted from the Parry Sound *Star*.

January 11, 1883.

Mentions hieroglyphics (?) on two granite stones (in Muskoka).

January 18, 1883.

Under the heading of 'Science of Archæology' is given a two-column article describing the collection of relics of C. A. Hirschfelder, Toronto, subsequently acquired by the Dominion Government and taken to Ottawa.

March 4, 1883.

Mentions a rare Indian pipe in the possession of C. A. Hirschfelder found in an ossuary.

February 23, 1885.

An article 'Who Killed Tecumseh ? establishes the story of his death by the hand of Col. R. M. Johnson. See also Farley, James J.

April 25, 1885.

Notice of the circular issued in connection with the proposed Archæological Museum.

August 20, 1885.

Notice of the discovery (by C. A. Hirschfelder) of a curiously marked piece of pottery on the Exhibition grounds, Toronto, the marks "resembling hieroglyphics." A letter to the *Mail*, Dec. 31, 1885, commented upon this discovery.

September 11, 1885.

Paragraph describing the use of wampum and similar aids for preserving the record of old treaties between tribes. Citation of an instance of this use on one occasion a few years ago at the Brantford Reserve.

October 17, 1885.

Notices the discovery of a masonic token in an Indian grave on the borders of Lake Medad, Nelson township, Halton Co. In a subsequent issue of the *Mail*, Nov. 4, C. A Hirschfelder, who secured the relic, gave the age of the token as 'not over 12› years, and perhaps not 100.'

October 30, 1885.

Notice of relics received (several from Port Hope) by David Boyle for the Provincial Museum, including some clay pipes and one of soapstone.

November 12, 1885.

Brief notice of the handing over of the York Pioneers' collection of Indian relics, etc., to the Canadian Institute's new museum of Archæology.

November 12, 1885.

Editorial comments on the establishment of a department of Archæology and Ethnology.

December 25, 1885.

An article, under heading "Toronto's Aborigines,' mentions the discovery of an aboriginal 'tombstone' near High Park, on which were carved a number of pictures and characters. Mention is also made of rock characters found two years before near Bobcaygeon.

Toronto Mail.—*Continued.*

December 28, 1885.

A letter, signed 'Pickwick,' refers to the pictorial 'tombstone' mentioned in the preceding article, as spurious; and asserts that the stone was carved by boys.

December 31, 1885.

A letter, signed 'Osh-aw-ah,' refers to the carved 'tombstone' as an 'Archæological fizzle.'

January 4, 1886.

A letter, signed 'Muckwech,' commenting on the carved 'tombstone.'

January 5, 1886.

A short letter, signed 'A Member of the Canadian Institute,' commenting on the 'death-stick' found near High Park.

January 6, 1886.

Letter, signed 'J,' citing arguments in proof of the genuineness of the carved 'tombstone.'

January 7, 1886.

Letter, signed 'A. C. Macdonald *alias* "Pickwick,"' reiterating the assertion that the 'tombstone' was carved by boys.

June 5, 1886.

Contains a despatch announcing the discovery of many Indian relics in Tiny township, Simcoe County. Editorial comments thereon appear in the *Mail* two days after (June 7), with observations on the old Huron missions of the Jesuits in the same locality.

January 8, 1886.

Letter, signed 'A Canadian Admirer of Talent,' deprecating the tone of the writer 'Oshawah' toward Mr. Hirschfelder.

January 29, 1887.

Mentions the discovery of Indian remains in Tidd's Island, near Gananoque. These having been sent to Toronto for examination by C. A. Hirschfelder, an interview with him is published.

February 2, 1887.

A letter, signed 'J. G.,' disputes the statement made by Mr. Hirschfelder, four days previously, that Indians knew nothing about applying heat to metals. The writer quotes Sir Walter Raleigh's interview with a chief in Central America.

May 16, 1887.

Notices the examination by Mr. Boyle of a mound on Tidd's Island, near Gananoque.

November 8, 1887.

Notices specimens received by David Boyle for the Archæological Museum.

July 25, 1888.

A long article—under the heading, 'Indian Legends,'—relates the legend of the White Stone Canoe, with references to Indian relics of Ontario.

July 16, 1889.

A four-column article under heading 'Our Indian Allies' describes a visit to the Six Nation Reserve near Brantford. Four illustrations.

Toronto Mail and Empire.

August 15, 1896.

Notice of David Boyle's archæological work in the Rice Lake district, more particularly the identification of the Otonabee Serpent and Egg mound.

September 1, 1896.

Notices the unearthing of Indian relics on the farm of Geo. Wilson, Cheltenham, Peel County.

September 12, 1896.

Notices the examination by David Boyle of bone pit in Beverly township, Wentworth County.

October 22, 1896.

Notice of some additions to the Provincial Museum.

January 2, 1897.

Notice of the discovery of seven old copper mines in Cook County, Minn., a few miles from Pigeon River, the international boundary.

Toronto Mail & Empire.—*Con.*

March 9, 1897.

Notice of two tomahawk heads, found in York County.

June 18, 1897.

Article (illustrated) on the formal reopening of the Educational art galleries and museum, Toronto. Notices the removal to it of the archæological exhibit.

Toronto Weekly Mail.

May 16, 1889.

Notices a mound on White Island, near Tonawanda, Niagara River, from which eleven skeletons were taken.

August 22, 1889.

Report of examination of an Indian fort near Clearville, Kent County, by Archibald Blue and David Boyle.

Toronto Weekly News.

January 6, 1887.

Notices the discovery of an Indian skeleton in Humber Park, near Toronto.

Toronto News.

June 20, 1890.

Describes additions of relics to the museum, with two illustrations of pipes in the Laidlaw collection.

Toronto Saturday Night.

November 28, 1896.

Notice of David Boyle's investigation of remains in Innisfil township, Simcoe County, including serpent and egg mound (Effigy?)

Toronto World.

June 21, 1888.

Notice of circular issued by the Canadian Institute calling for information on Indian Sociology.

March 13, 1889.

Notice of the Archæological Museum.

May 30, 1889.

Announcement of relics found at Beausoliel Island, Simcoe county. (See Fourth Archæological Report p. 64).

Reprint observed: Barrie *Gazette*, June 12, 1889.

July 5, 1897.

An article, under the heading 'Indians are dying out.' discusses the decadence of Kabashkong's band of Chippewas near Port Arthur.

Walkerton Telescope.

Jan. 4, 1878.

Paragraph (apparently reprinted from an Ottawa paper) describing a copper implement found in J. Ferrin's Phosphate of Lime Mine, township of Templeton (across the river from Ottawa city.) It was embedded in the phosphate five feet below the surface.

Wallace, Joseph, Sen.

Scenes from the past. Orillia *Packet.* (Feb.-June, 1896.)

This series of eleven articles re-tells the story of the Jesuit Mission to the Hurons, with a few references to the antiquities fonnd in recent years throughout the Huron country, especially those at Orillia town.

Relations of the Jesuits. Toronto *Globe*, May 16, 1896.

A letter in which he describes a fishing station of the ancient Hurons, with remains of hurdles or lattice-work, at the Narrows, Lake Simcoe.

Whitelock, F. C.

Coulson Correspondence. Barrie *Gazette*, April 27, 1887.

Brief notice of Indian relics found at a village site near Coulson, Medonte township. The correspondence is anonymous, but is known to have been written by the late F. C. Whitelock, teacher.

Coulson Correspondence. Barrie *Gazette*, Sept. 7, 1887.

Further notice of the village site on the farm of James Cooke, near Coulson, Medonte township.

Whittlesey, C.

Ancient Mining on Lake Superior.

Wilson, Sir Daniel, LL.D., F.R.S.E.

Report on the supposed discovery of Tecumseh's remains, , Oct. , 1876.

Extract: Weekly *Globe*, (Toronto), Oct. 6, 1876.

A report made at the request of the Premier of Ontario, in which Dr. Wilson declares that the remains found at Moraviantown were not those of the Shawnee chief.

Hybridity and Absorption of the Red Indian Race. The *Canadian Journal* (Second Series). Vol. XIV, pp. 432-66.

A paper was also read by Dr. Wilson before the British Association (1878) on the same subject, referring specially to the absorption of Indian blood by the Canadian people.

Notices seen: Toronto *Mail*, (Supplement) Sept. 14, 1878.

A comparison of the Succession of Archæological Periods in America with those of Europe. An address.

Abstract given in the Toronto *Globe*, Oct. 20, 1879.

Earlier Indian Tribes of Ontario, as illustrated by some recent explorations. An address.

Abstracts given: Toronto *Globe*, Nov. 3, 1879; Toronto *Mail*, Nov. 3, 1879.

Notices the Huron mode of sepulture; also an examination of an Indian cemetery of single graves on the ridges about twelve miles to the north of Toronto (*Mail*). Also examination of the site of a palisaded town twelve miles 'north of Markham' (*Globe*).

A paper on Ethnology, with references to Ontario reli

Abstract given in Toronto *Mail*, Jan. 19, 1882.

Incidents illustrative of the changes wrought on the native Indian tribes by the practice of adoption.

Abstract given in Toronto *Mail*, Mar. 27, 1882.

Toronto *Globe*, Aug. 24, 1882.

Notice of 'Authropological Section,' Montreal Meeting, A A. A. S, before which was read a paper by Dr. Daniel Wilson, proving that 'this continent, north of the Alleghanies and east of Lake Huron, was inhabited by Dolicho-cephalic races; while the parts south of that district were inhabited by Brachy-cephalic races.'

Winnipeg Weekly Sun.

Nov. 12, 1884.

Reprint from the Rat Portage *Progress* of a short article entitled, 'Rainy Lake Relics.' It notices the examination of several Indian mounds, by Mr. Lawson of the Geological Survey, in which were found some copper tools highly tempered, etc.

Withrow, Rev. W. H.

Native Races of North America. Toronto, 1895.

A small volume on the Indians, including those of Canada.

UNIVERSITY OF MICHIGAN
3 9015 01745 1306

ANTHROPOLOGY